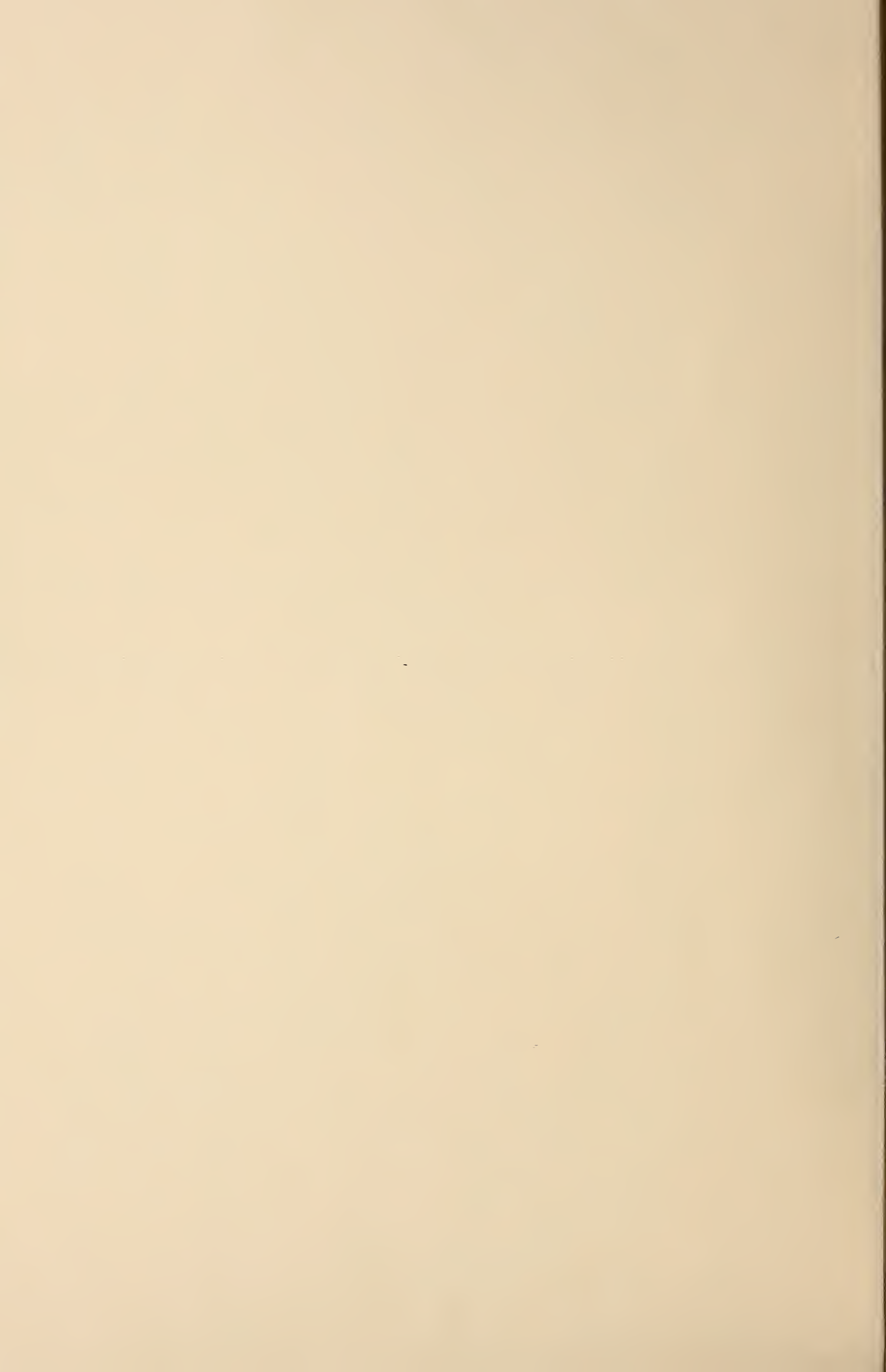


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Current Comment.

A RECENT issue of this paper contains the platform of the National Farmers' Alliance and Industrial Union, adopted last year at St. Louis. Below is given the Alliance platform adopted last month at Ocala, Florida:

1. We demand the abolition of national banks; we demand that the government shall establish subtreasuries or depositories in the several states, which shall loan money direct to the people, at a low rate of interest, not to exceed 2 per cent. per annum, on non-perishable farm products and also upon real estate, with proper limitations upon the quantity of land and the amount of money. We demand that the amount of the circulating medium be speedily increased to not less than \$50 per capita.

2. We demand that Congress shall pass such laws as shall effectually prevent the dealing in futures in all agricultural and mechanical productions, preserving a stringent system of procedure in trials such as shall secure the prompt conviction of offenders, and the imposition of such penalties as shall secure the most perfect compliance with law.

3. We condemn the silver bill recently passed by Congress, and demand in lieu thereof the free and unlimited coinage of silver.

4. We demand the passage of laws prohibiting the alien ownership of land, and that Congress take prompt action to devise some plan to obtain all lands now owned by aliens and foreign syndicates, and that all lands now held by railroad and other corporations in excess of such as is actually used and needed by them be reclaimed by the government and held for actual settlers only.

5. Believing in the doctrine of equal rights to all and special privileges to none, we demand that our national legislation shall be so framed in the future as not to build up one industry at the expense of another. We further demand a removal of the existing heavy tariff tax from the necessities of life, that the poor of our land must have. We further demand a just and equitable system of graduated tax on incomes. We believe that the money of the country should be kept as much as possible in the hands of the people, and hence we demand that all national and state revenues shall be limited to the necessary expenses of the government, economically and honestly administered.

6. We demand the most rigid, honest and just state and national governmental control and supervision of the means of public communication and transportation, and if this control and supervision does not remove the abuses now existing, we demand the government ownership of such means of communication and transportation.

A comparison between these two platforms will show some important changes. The second, third and fourth planks are unchanged. The one on fractional currency has been omitted. The last plank now favors government control, instead of ownership, of the means of communication and transportation, a very sensible amendment.

The most important change is in the first

plank. In it the Ocala platform demands the establishment of subtreasury warehouses by the government, for the purpose of holding farm products as security on loans, and also demands government loans on real estate. In this particular the platform is decidedly inconsistent. The fifth plank declares, and rightly, against class legislation; the first plank demands class legislation of the most sweeping character. The true inwardness of the subtreasury scheme is to force up prices on farm products by getting up a gigantic corner on them. Producers are to store up their products in these government warehouses and receive on them treasury notes that shall circulate as lawful money. Being relieved of any immediate necessity for selling them, they can hold their products until the price is high enough to suit them, or by combining they can at any time produce a scarcity in the market by withholding them from sale, and thus force up prices just as high as consumers will stand.

It would hardly be just and equitable for the government to advance loans on farm and not upon merchantable products. The long and short of it is that this subtreasury measure is class legislation pure and simple, the very thing that the Alliance and all other agricultural organizations ought to most vigorously oppose. We do not believe that this measure ever will receive the indorsement of the majority of the organized farmers of this country, or ever become the law of the land.

A FEW months ago, when political demagogues of the most unscrupulous sect were busy misrepresenting American manufacturers of farm machinery and striving to array the farmers against them, the editor of the *Farmers' Call* made a thorough investigation of the farm implement trade, both foreign and domestic. As a result of this careful investigation he says that one fact was revealed with startling certainty: "The large majority of manufacturers of farm machinery could sell to the foreign trade for twenty per cent less than to the home trade, and yet the foreign trade would net them as much; and this is altogether owing to the foreign trade being spot cash."

He describes the different methods of selling to the foreign and home buyers, and clearly shows that it takes twenty per cent to cover the difference between spot-cash and credit sales. The foreign trade is spot cash, and seventy per cent of the home trade in agricultural machinery is on time, the average credit being about one year.

Do the honest purchasers who pay promptly for what they buy realize what a burden the credit system places on them? Do they know that every time they buy four machines they pay for five? That is the effect of the credit system upon which farm machinery is sold. The honest, paying purchasers pay all the expenses of collection, bad debts, interest on the money, etc. Another thing is very clear: It does not pay for the farmer to make a banker of the manufacturer or merchant of whom he buys goods. It may not be practicable to abolish the credit system entirely, but it would be a good deal better for the farmer to pay cash for his farm implements, even if he has to borrow the money to do it with.

Let him borrow it of those who are in the business of loaning it. When he buys on time he is indirectly borrowing money, and he has to pay about twenty per cent interest on it. If his credit is at all good, he ought to be able to borrow money for eight per cent of those who are in the business of loaning it. If there is any business at all about him he will see that it is to his advantage to save twelve per cent on the money he invests in farm implements. As to the buyers who do not pay their debts, it is not necessary to waste any sympathy. They deserve none. They get the most benefit of the credit system, when they deserve none of it. They form a class of parasites upon their deserving neighbors.

Upon farmers themselves depends the continuance of a system that works injustice. The manufacturers will naturally adopt what is the easier for themselves. For illustration, the American Harvester Company may have a monopoly of the business of making and selling mowers and binders. It will be within its power to do either a cash or credit business. If it will be better for them to adopt the spot-cash system they will do it. If it will be easier for them to follow the credit system, with its 20-per-cent advance, the company will certainly not undertake the work of reforming the method in vogue in the domestic implement trade.

Through the Alliance, Grange and other organizations the farmers of this country can soon revolutionize the implement trade to their very great advantage, if they only will. Many of them are now asking for financial reform. Reform begins at home. One of the important financial reforms they can accomplish is the abolishment of the evils of the credit system.

NAILED to the top-mast of the *Rural New Yorker* is a flag bearing the motto, "Down with useless fences." That is a very sensible motto, and one that every sensible farmer will adopt.

Let him take the time, some winter evening, and figure the amount of money invested in the fencing on his farm and what it costs annually to keep it in repair. He will probably be surprised. Then let him spend a number of evenings in planning a better system of husbandry that will reduce necessary fences to the minimum. Having formed definite plans, he can gradually rearrange his farm fences so that in the course of two or three years his fields will all be of better shape and larger size.

A little calculation will show how the number of rods of fencing depends on the size and shape of the field. It is less for a square field than for an oblong one of the same size. It is less in proportion to the number of acres contained for a large than for a small field. To illustrate: An oblong ten-acre field twenty rods wide and eighty rods long has two hundred rods of fencing, twenty rods per acre. A square ten-acre field is forty rods each way and has one hundred and sixty rods of fencing, sixteen rods per acre. An oblong forty-acre field forty rods wide and one hundred and sixty rods long has four hundred rods of fencing around it, ten rods per acre. A square forty-acre field is eighty rods each way and has three hundred and twenty rods of fencing, eight rods per acre.

A little further calculation will illustrate the difference in cost. Assume that the average cost of good fencing is one dollar per rod. Then the cost of fencing a one-hundred-and-sixty-acre farm divided into oblong ten-acre fields of the dimensions given above would be \$3,200. Divided into square forty-acre fields, the cost would be \$1,280. The extremes, of course, illustrate most forcibly the difference in the cost of fencing.

As there is a strong, natural antipathy to taxation, the way to make anything odious and to bring about change or reform is to show it up as a tax. Well, that is what every rod of useless fence is, a needless, burdensome tax. Assuming the average price of good farming land to be \$50 per acre, the cost of fencing it, using the same figures given above, is a tax of from \$8 to \$20 per acre, 16 to 40 per cent, payable every ten, twelve or fifteen years, the life-time of an ordinary fence, leaving the yearly repairs out of consideration. Every single rod of useless fence, even on the most economical system of fencing, is a tax of two per cent or over on each acre. To get rid of this oppressive tax, "down with the useless fences." Farm fencing should be reduced to the actual necessities of the most profitable system of agriculture economically administered.

The village fence is even worse than the farm fence, comparing cost and benefits. In communities that possess the highest type of civilization, front-yard fences are being "downed" to stay. And in some places, both village and farm fences have been almost entirely abolished.

The principle on which most stock laws are made, that every man should be required to fence in his own stock instead of fencing out his neighbor's, is a sound one and aids to down useless fences.

In response to an urgent demand, Congress provided that the 1890 census should contain the mortgage indebtedness statistics of the whole country. The mortgages for the past decade have been taken from the records, and the census office reports a total of over \$850,000,000. The investigation into the purposes for which mortgages were incurred shows that about three fourths of them were for purchase money or for improvements, and that one tenth was for business uses. The total sum, though an immense one, is not alarming, considering the main causes for which it was assumed.

The total sum is very much less than what was supposed. Two years ago some mortgage statistics were going the rounds of the press that placed the farm mortgage indebtedness of Illinois alone at \$1,000,000,000. And the farm, not the total mortgages, of Kansas, Illinois, Indiana, Ohio, Iowa, Michigan and Wisconsin were estimated to be over \$4,500,000,000. At that time it was shown that these figures were largely the result of loose guesswork, and our readers were warned that no reliance could be placed on them or on any political arguments based on them. Mortgages are grievous burdens, but the census returns show that they are not nearly as great as depicted.

JL. M. IRBY, a farmer and a leader of farmers in the Alliance movement, has been elected United States Senator from South Carolina.

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Our Farm.

THE NEW ONION CULTURE.

BY JOSEPH.

ROWING THE PLANTS.

—The whole tone of a number of inquiries about the way I grow my onion plants for transplanting, shows that the writers are not much acquainted with the construction and use of what gardeners call "cold-frames." There is an evident demand for information on the minute details of the operation, and so I write this—not for the gardener, but for the farmer, the farmer's wife or the farmer's boy, who desires to try the new way of onion growing, but does not know the meaning of the technical terms in use by gardeners.

What is a cold-frame? A simple box open at the bottom and covered with a so-called "holed sash." Such a box is shown in Fig. 1. It is placed upon the ground in some well-drained and well-protected spot; for instance, on the south or south-east side of a building, a high, board fence, a wall or close evergreen hedge. The box, of course, is of the size necessary to accommodate the sash or sashes, if more than one are used. As the ordinary hot-bed sash is three feet by six, consequently the frame outside is six feet from front to rear, and three feet in the other dimension for each sash to be used. The illustration shows a single-sash frame, which will be large enough for the beginner in onion culture, since it could not be advisable nor safe for any one to go into onion growing on a large scale right at the start.

Make the rear of the box one foot high, the front only eight inches high, so that there will be slant enough from rear to front to carry off the rain water. Soil may be banked up around the outside of the frame for the sake of protection from excessive cold. Now fill the box with a mixture of good, turfy loam, sand and fine, old compost to about four inches from the top. Ordinary, rich garden soil, freed from stones and rubbish by sifting, and further enriched with fine compost, well mixed and sifted, will also answer every purpose. The surface is then made fine and smooth with a steel rake, and marked off with straight furrows from front to rear. They are easily drawn across with the handle of the rake or with a little stick, or even with the index finger, and should be about an inch deep and three to four inches apart.

The frame is now ready for the seed. An ounce of seed will give a good

stand of plants in a one-sash frame, and there will be room enough for the proper development of the plants. We may expect about 5,000 of them from the one ounce of seed. I have already stated that I prefer the Prizetaker onion to all others for this purpose. Spanish King is another good yellow onion, and Prof. W. J. Green, of Ohio, writes me that the White Victoria is the best of the white sorts for the new method of onion growing. I think White Glohe (Southport White Globe) will also prove good. The old standard varieties—the Red Wethersfield and Yellow Danvers—may also be grown under this system, but I would plant them much closer than I would the ones named before.

Now the question is, what is the right time for sowing seed? This, of course, differs with the locality; but I can give at least the general rule, to plant about six weeks before the ground outdoors can be expected to be in good order for receiving the plants. In the climate of western New York I sow the seed from March 1st to 15th. When ready to sow, scatter the ounce of seed evenly over the entire surface of the bed; then fill in each furrow carefully with the hand or the back of the rake. This operation buries all the seed in the furrow. Afterwards, the soil should be well firmed by patting it with the face of the rake, or by means of a piece of board. Now the sash is put on and the bed left pretty much to itself, except giving air on fine days, and an occasional thorough watering when the soil appears to have become quite dry. Overwatering should be avoided. As the season advances, the sash is removed, at first partially and then entirely, in order to harden off the plants, which is an important matter. The onion, it should be remembered, is quite a hardy plant, and can stand considerable cold. In about six weeks the plants will be ready for transplanting to the open ground, and appear as shown in Fig. 2.

Now this is all right, so far as the beginner is concerned; but I will have to add a few words for the benefit of the market gardener and all those who may wish to grow onions on a larger scale. I am preparing to plant an acre of Prizetakers next spring, and I plant close, so that 130,000 plants will be required. In that case I make the rows in the seed bed only three inches apart, and sow from one and one half to two ounces of seed to the sash. I calculate on fully 9,000 plants to the sash, perhaps 10,000, and consequently have to use about fourteen sashes. I would not advise to crowd the plants still closer. At any rate, we will require about one and one half pounds of good seed to grow an acre of onions in the new way, if we plant for the largest yield on that area.

The old method requires six or eight pounds of seed per acre. The saving of the difference is an advantage of the new method, and although one of the less important ones, is yet worth mentioning, when seed costs \$5 or \$6 a pound.

The plants can be transplanted at almost any stage of growth, from the tiny thing not bigger than a darning-needle, as found

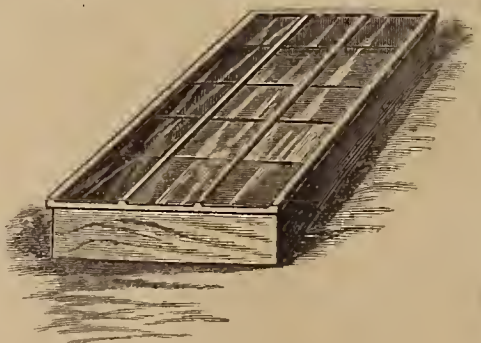


FIG. 1.

three weeks after sowing the seed, to the vigorous and well-rooted plant of pencil size and larger. When of about three sixteenths of an inch in diameter, however, they are of best size for the operation. They are then more easily handled and there will be a smaller percentage of loss than when the plants are smaller. When planting on a large scale, we may need several weeks' time for the job of transplanting, unless we have a large working force. So if we want the plants all just of the right size, it would be better to sow only a few frames at a time, at intervals of several days, to have the plants come in proper succession. I do

not object to sowing in a hot-bed with moderate bottom heat, instead of cold-frame, especially if seed is to be sown in February, or if the winter is rather severe. In an emergency, frames covered with waterproof cloth may answer, but glass is by all odds the best and safest to use.

Now, as we have the plants, the next thing is to know how to plant them. This I will tell in next issue of this paper.

SUGGESTIONS FROM THE STATIONS.

BY JOSEPH (T. GREINER.)

TOMATOES.—In bulletin XXI. of the Cornell University experiment station (Ithaca, N. Y.), the horticultural division (L. H. Bailey and W. M. Munson) tells of various tomato tests made the past season. The station people find that in our short, western New York seasons it is difficult to secure the large yields of the middle states.

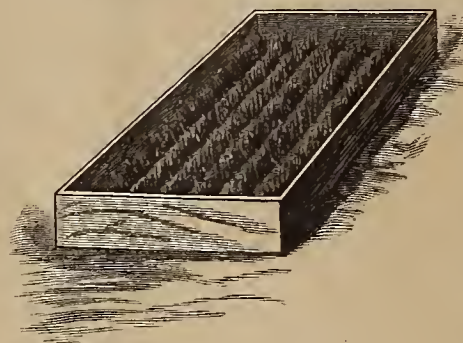


FIG. 2.

Growers in Maryland and Delaware with little effort harvest a crop which, in ordinary years, we can obtain only under the most forceful culture. Thus, every year's experience strengthens the conviction that in the North tomato plants should be started early and forced rapidly, and set in open ground quite early, even if the weather should happen to be raw and dark. The average yield at station grounds per plant of marketable tomatoes, before frost, was 11 3-10 lbs. in 1890, and 12 1/2 lbs. in 1889. If similar treatment were applied, even in part, to the tomato fields which supply the canneries, greatly increased yields would be sure to follow. This treatment is as follows: Careful selection and breeding of stock seed from year to year; early sowing; frequent or occasional transplanting, producing stocky plants; rich soil, well prepared and well tilled. If the grower has facilities for forcing the plants rapidly, the first half or the middle of March is a proper time for seed sowing in this latitude.

The bulletin states that the yields in New Jersey, Delaware and Maryland fields, even with the longer seasons, by which two or three pickings are gained, are only from eight to sixteen tons. From my own personal observation I know this to be true, but it should not be so; for it is a very easy thing for people in the states named to raise twenty tons and upwards to the acre. It is simply a question of manure. And here is just where the profit comes in. The fallacy of the old notion that tomatoes are not as productive on rich soil as they are on poorer ground has long been demonstrated. The more manure and the richer the manure, the more tomatoes; that is settled. High-grade, concentrated manures answer well, and may be cheapest in many cases. An expense of \$20 or \$25 per acre for manure may increase the yield by eight or ten tons. But if rich compost is freely used, especially fish-compost, as is sometimes done near the sea coast, the distance of four by four feet, as mentioned in the bulletin for each plant, is much too small. I would set the ordinary canning and market tomatoes, such as Matchless, Ignatum, Perfection, Beauty, etc., not less than five by five feet. The richer the soil the wider apart they should be planted; that is the general rule to be followed.

I have heretofore opposed Prof. Bailey's statement that tomatoes "run out," even with best culture, and that the average life of a variety is only about ten years. We are now informed, however, that "running out" does not necessarily mean "deterioration," but only a change of some leading characteristic for better or worse. The strongest proof of the fact that varieties are unstable, and soon "run out," is the difficulty of maintaining any variety true to its type under good culture and careful selection. The variety under this treatment is very apt

to "improve," or depart from its original character.

Experiments made with seedling plants and plants from cuttings, resulted in favor of the former. The seedlings gave the earliest and largest returns. Trimming the plants proved of considerable advantage. The plants were headed back from three to six inches on all the leading shoots, July 28th and August 25th, and all the sprouts from the base of the plants were taken off. In every case there was an important gain in earliness and productiveness. The labor of trimming is very slight, and it would appear to be profitable.

In regard to varieties, my experience in some cases differ from that of the station people. The Ignatum is named as standing at the head. It is a good tomato, no doubt, but for general purposes, especially for canning, I would be satisfied with the Matchless, which is not yet excelled by anything on the list. Chemin Market (Vaughan) is described as follows: "Of medium size, deep red, somewhat elongated. Resembles Hathaway. Smooth, prolific, uniform in size and shape. Good." Undoubtedly this is the same as the Chemin, which Mr. Burpee had sent me for trial. It is a fine-looking variety, growing in large clusters of seven or eight specimens each. The great fault of this novelty is want of solidity, as the fruit has four large seed cavities, while the most solid sorts have numerous small seed cavities.

Table Queen (Henderson), which the bulletin mentions as "Mikado with ordinary foliage; fruits average, a little larger, and are a little more irregular than Mikado," I find to be entirely distinct and promising. Fruit resembles Mikado in color, but not otherwise; flattish, of large size, very heavy and solid; plant dwarfish, but very productive. Ruby Queen (Childs) is pronounced "evidently the same as Table Queen of Henderson." I think they are different in all leading characteristics except color of fruit, which is pink (or purple), and not especially bright or attractive. Ruby Queen seems to be a new type of tomatoes, which also appears in two other sorts, perhaps only under two other names; namely, Mansfield Tree (Mills) and Annie Dine (Wilson). At any rate, the three novelties resemble each other very closely. Here we have the most rampant growers with which I am acquainted. Fruit is of very large size, unexcelled (if indeed equalled) in solidity and productiveness. Some of the specimens, however, show tendency to irregularity, and further improvement in this direction will be desirable. The green fruit of these three sorts, as well as of Table Queen, usually show dark stripes radiating from the apex towards the stem. Early Ruby (Henderson) is of medium size, bright red, early, productive. I consider this a very promising sort for early market. It is much better than King of the Earlies, or any of those first-early sorts, and it seems to be as early. If so, King of the Earlies will have to go, as it is one of the poorest of our tomatoes in quality, and its only redeeming feature was its extreme earliness. A new variety is also announced as being in the hands of the station—the Ithaca. "Medium in size, about three inches in diameter, nearly spherical, very smooth and remarkably uniform in size; color, light cherry. A new variety; very promising among table tomatoes; apparently valuable for forcing." No seeds are yet to be disposed of by the station this season.

In 1889 I had imagined to be able to see fine results from the use of nitrate of soda applied at the time the plants were put in open ground. The past season I could not see any such effect from the use of the nitrate. The trials on the station grounds this same season also have seemed to show that neither nitrate of soda nor muriate of potash alone are profitable tomato manures upon thin soils.

GRAIN RATIONS FOR COWS AT PASTURE.—The agricultural division of the same experiment station (Cornell), reports in bulletin XXII. the results of trials made for the purpose of discovering whether there is any profit, in milk and butter, in feeding regular grain rations to cows kept on pasture during the period from May 25th to September 27th. The conclusion given by Prof. I. P. Roberts and Henry H. Wing is as follows: "In two trials in two seasons we have received no return in

milk and butter from feeding a grain ration to cows on good pasture. In one trial with cows soiled on fresh grass we have received an increased milk and butter production, and in saving of grass consumed, barely enough to pay for the cost of the grain ration added.

In neither case has any allowance been made for increased value of manure, when grain is fed, which would be considerable in amount, but exceedingly difficult to estimate with exactness. We are still of the opinion that several repetitions of this experiment will be needed before the matter can be considered conclusively settled."

SUGGESTIONS ON HANDLING COTTON.

I met an intelligent cotton buyer the other day, who, in the course of our conversation, made some remarks about our great staple which I consider well worth publishing. They were in substance as follows:

The manufacture of cotton goods in the South is slowly and steadily increasing; and the time will probably come when the Southern people will make all the heavier grades of cotton consumed in the South. It is hardly to be hoped that the finer fabrics will ever be successfully manufactured here. A humid atmosphere, such as prevails in England and the Eastern states, is necessary to very fine spinning. The atmosphere of the South is too dry for such spinning. It will pay the South well to manufacture heavy cotton goods, beyond doubt. Indeed, that has been fully demonstrated by factories now in operation.

I will tell you, though, what will pay the Southern cotton raiser better than almost anything he can do. It is a more careful handling of the staple. Great loss is sustained every year by our cotton growers on account of damage to the fibre. In the first place, many are tardy in picking their crop, thereby entailing loss from rain and wind. Much cotton is beaten out on the ground, becoming dirty and discolored, thus reducing its value. Much trash is necessarily gathered when cotton is picked late. In many instances the cotton is piled upon the ground as it is picked, where it often receives one or two rains, greatly to its injury. It pays to have cotton picked early, picked clean and put under a good shelter as soon as picked. The planter had better plant less cotton and gather it in better condition than is often done at present.

Another great loss is sustained in the ginning of cotton. Most of it is ginned by steam power gins, run at too great a rate of speed. The fibres are cut short and napped instead of being left long and straight. This, of course, lowers the price of the cotton materially.

Many valuable improvements have been made of late years in cotton ginning machinery, but they have been made more with a view to the rapid handling of the staple than to an improvement of its quality. Yet some of these inventions really do much in the way of cleaning the cotton also. The bulk of the seed is sifted out in the latest processes of handling seed cotton; but, of course, its discoloration from rain is not removed.

The greatest reforms needed just now are cleaner picking, better shelter and slower ginning. The two first can be accomplished by the planter himself; but the manner of ginning is, of course, at the discretion of the gin owner largely. Where the planter owns a ginning outfit, however, he can control the speed at which it is run. Even the public gins can, by the pressure of public demand, be made to do better work also. Even the difference of one eighth of a cent a pound on cotton amounts to about five million dollars to the South. With proper care in handling and ginning the crop, twice that sum could be saved at least.

DICK NAYLOR.

EARLY POTATOES FOR MARKET.

Joseph's article on how to raise early potatoes for market, in October numbers of FARM AND FIRESIDE, is good, and I will tell how I met with great success in producing good-sized, merchantable potatoes inside of ten weeks from planting. To begin, the plants require three very essential things to succeed; namely, carefulness, good, sound seed of an early kind, which he knows will suit his locality and very rich ground. I used the Charles

Downing, sprouted good, medium-sized tubers until the sprouts measured six or eight inches long, pulled off all but two sprouts to each whole tuber (here is where carefulness is required), laid them on trays or in flat baskets, and planted them in trenches fifteen inches apart. The trenches were three feet apart, and covered or filled nearly level; then I gave them a liberal dressing of my own home-made potato fertilizer, rich in potash and phosphate. I filled the trench up level with the sprouts barely sticking out. If the weather is warm the tops will show green in a very few days. Then cultivate frequently; in fact a person can't do too much work with a cultivator run shallow.

Keep your ground level as much as possible; quit work as soon as bloom buds begin to show. I generally use ground which has been heavily manured the year previous and produced a crop of cabbages. This year I planted on April 4th; on April 19th it was cold enough to form ice, but the wind was high and the ground dry on top and did no damage to the potatoes. By the middle of June my crop was ready for market, not ripe, but as ripe as southern potatoes shipped here, usually are. Again, I say that the main things are very rich, warm land, good sprouted seed, and not to leave more than two sprouts and not break them off in planting. MAX.

FEEDING FOR MILK AND BUTTER.

Please give best plan to feed a Jersey cow through the winter season for milk and butter. Can get clover hay at \$5 per ton; timothy hay, \$7; corn and oats ground together at \$1.40 per 100 pounds; oil meal 1½ cents per pound; bran, \$1 per 100 pounds; corn fodder, \$3 per common load. Would it be best to cut hay and steam it before feeding, and put the chop feed on it? Any suggestions will no doubt be well appreciated by many of your readers, and especially by

A SUBSCRIBER.

Of the articles named, use clover hay, corn and oats ground, oil meal and wheat bran. Cut the hay, moisten it by sprinkling water over it. Then pour the mixed meals over it and stir until the whole is thoroughly mixed. Feed this mixture twice a day morning and night. Besides this, put in the rack as much hay as the cow will eat up clean between meals. Occasionally, it is well to substitute either timothy hay or good corn fodder in the rack, for a couple of days. The amount of hay and grain will need to vary with individual cows. The safe rule is to increase the amount as long as the yield of milk or butter increases. When the yield becomes stationary, decrease the amount of food a pound or so.

The proportion of hay and grains we have found most satisfactory is: Hay, 12 pounds; corn meal, 3 pounds; oatmeal, 3 pounds; oil meal, 2 pounds; bran, 2 pounds; total, 22 pounds. This is for a Jersey cow weighing about 850 pounds.

The cow should be kept thoroughly comfortable at all times, and it will pay to curry or brush her off every morning. If silage can be purchased, about 25 pounds a day may be used with profit from December until April. When silage is used, the meals may be fed dry and the cut hay need not be moistened.—*Jersey Bulletin.*

NEW WAY TO PLANT WHEAT.

Colonel Wirt M. Hughes returned yesterday morning from north-western Kansas, where he spent a week with his parents. "The farmers in that section," said he, "are trying a new plan of raising wheat, and if it proves successful, the grassy prairies on those extensive plains will soon be converted into wheat fields. The scheme is to plant wheat on the prairie without breaking the soil with plows. It is accomplished by means of traction engines, attached to which are little subsoil plows and a wheat drill. There are fifteen little shovels or subsoil plows attached to each engine, and these serve to tear the sod enough to allow the drill to plant the seed.

"The prairies in that section are covered with buffalo grass and it never grows very high, so if the wheat crop ever matures it can be reaped easily. The shade of the wheat will also kill the grass, so it is claimed by the farmers, so that the second crop will be more easily put in than the first. One farmer who tried this scheme

on a very small scale last fall reaped a good crop this year, and this fall he intended planting four sections of prairie with wheat in this manner. Aside from this there are other farmers who are trying the same scheme. There was more wheat planted in western Kansas this fall than ever before."—*K. C. Times.*

THE WINTER JACK-KNIFE.

The jack-knife stands foremost among our good and useful institutions. It is applied to and relied upon in all seasons for sundry helps and lifts that piece out and fill in.

In winter, however, in the long evenings, on stormy days, between "chores," when the wood-pile and logging-camp are abandoned, the jack-knife play is at its height. Men and boys like to whittle, to make something—a litter at least—even if chips and shavings for the morning's fire be the only product; but greater satisfaction comes when the keen blade, the skillful hand and the accurate eye unite to form things which are immediately useful.

Although the farmer is benefited by modern inventions, yet some old devices in the interest of economy and continued usefulness will never give way to the new. The homely, home-made will remain. Among these are the wooden latch, catch and button on gates and doors, indoors and out, in and around the farm buildings.

Iron is chilling to the touch in winter, and when full of frost, brittle and easily broken, for doors and gates around the barn and sheds are often subjected to hard usage. All gates leading to sheep, calf or even pig-pens, in stalls for all animals, should have wooden latches or bars.

The inmates of these pens and stalls may "lose flesh" on frosty mornings if they bring their noses into contact with the iron latches or handles. The old-fashioned, wooden latch, with raw-hide lift, fills the office better and longer than iron. The latch gives way to the sliding bar when the door will permit. The broad, wooden button, with screw through it, often accompanies the latch, and then if rubbing noses lift the latch or slide the bar, the button keeps the door or gate shut.

During the winter on many farms, the jack-knife turns out these door fixtures and many other things from good oak, hickory or elm. If elm be obtainable, it is the best for many purposes, for it is tough and elastic. Farmers and others are loth to part with elm, but if a tree must go, let every piece of trunk or branch large enough, cut into convenient lengths, be saved.

No wood makes a better axe-helve than elm, and often the natural run and crook of the wood will have the exact shape of the helve. For handles for gates, hatchets, hammers and many other tools, elm is the best, and after splitting, only the good jack-knife and sand-paper are needed to make it ready for use.

The jack-knife has a busy time before it, and every blade is ready for the work. It makes, or helps to make, pins or pegs, a good half bushel, in size from that of a pencil to that of a ship-pin, the sizes corresponding to those of the auger-bits. In the busy season, if a plow-beam be cracked, or a wagon-tongue be sprung, these pins mend, temporarily at least, and bridge disaster and break-down.

There cannot be too many pegs around the barn, in the horse and cow stables, on which to hang harness and many things, a peg for every collar and bridle, another for every saddle and breeching, pegs for tools, for the lantern in different parts of the barn, pegs everywhere for many purposes. The "peg system" is a great economizer of time and money. A good jack-knife, the combination jack and pruning-knife is a mainstay everywhere.

GEO. APPLETON.

WHY BOYS LEAVE THE FARM.

Farmers often have themselves to blame for the dislike their sons take to a business in which they find only the rough and hard side of life. Farm work is not so hard and disagreeable as it used to be before the introduction of much labor-saving machinery that now lightens it. Still, though less disagreeable, the boys do not like to have its roughest and worst features put on them. Nor will it make it any better for the father, who now shirks

whatever he dislikes, to tell his sons how much harder he had to work than they when he was a boy. Farm work is easier than it used to be, and the boys should be the first ones on the farm to find this out practically. Then fewer of them would be led from the farm by the attractions of city life.

So far as possible, boys ought to have a personal and pecuniary interest in everything they do, and the girls also, for that matter. Their labor legally belongs to the parent until they become of age, but he is indeed a strange father who keeps his sons or daughters at work without pay merely to save the wages of hired help. This working without pecuniary interest in what one is doing is too much like slavery.

Just as soon as the pressure is removed and the child becomes legally its own master, all restraint is thrown aside. Every young person should have some chance to work for himself on some corner of the farm, and whatever he thus earns should be his, to be saved or spent under parental supervision.

In this way the habit of earning money and the knowledge of what it costs to procure it, as well as the best means of using it, may be learned. The farm has undoubtedly greater opportunities for teaching both boys and girls this practical knowledge of money and its value than any other business in the city can possibly enjoy. A great part of the advantage of living in the country, for bringing up a family of children, will be lost unless this opportunity is utilized as much as possible. —*American Cultivator.*

FARMER'S PROGRESS.

In this day of organization among farmers, if we hope for good and beneficial results we must go at it in a business way. The farmer's gathering must be an educational factor that will equip him, making him a better farmer, better citizen, better business man and a hustler who has been educated by contact with his fellow farmer and the world, which will give him knowledge and a breadth of understanding that will make him proud of his calling and not a foot ball for politicians. Equip him with these capabilities and practicalities and make him an educated man of the world, build him up into a thinker instead of a follower of vagaries and non-essentials and you will have so fitted and prepared him that he will lead and have a following too; not because he is a farmer, but because he respects his business and is level headed and has extended his horizon; and this alone will place him side by side with business and professional men in legislative halls and places of trust, for merit in him will be recognized as well as in those of other vocations.—*W. H. Morrison, Superintendent of Wisconsin Farmer's Institutes.*

THE EXPERIMENT STATION RECORD.

The agricultural experiment stations of the country, over fifty in number, issue annually some three hundred bulletins and reports of from four to two hundred and fifty pages each. Very few people have access to all of these publications, and fewer still can afford the time required to note the character and results of the experiments they describe. Those who find it desirable to keep pace with the progress of agricultural experimentation will find a condensed record of all station work in the Experiment Station Record, issued by the United States Department of Agriculture, Washington, D. C.

Poisoned by Scrofula

Is the sad story of many lives made miserable through no fault of their own. Scrofula is especially a hereditary disease, and for this simple reason: Arising from impure and insufficient blood, the disease locates itself in the lymphatics, which are composed of white tissues; there is a period of fetal life when the whole body consists of white tissues, and therefore the unborn child is especially susceptible to this dreadful disease. But there is a remedy for scrofula. It is Hood's Sarsaparilla, which by its powerful effect upon the blood, expels every trace of the disease and gives to the vital fluid the quality and color of health.

Hood's Sarsaparilla

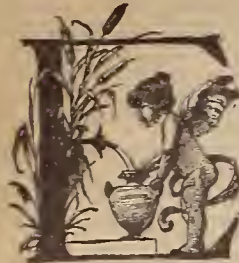
Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

Our Farm.

NOTES FROM THE HOME GARDEN.

BY JOSEPH.



EARLY POTATOES.—My article in the issue of October 1st, on growing early potatoes for market, has brought me several inquiries for prices for Early Ohios for seed. I wish to say

that I grow no potatoes for seed except for my own use. Whenever I have potatoes to sell they go to market or to neighbors for any use they may wish to put them to. If I were in the business of growing seed potatoes for sale, this mere fact would put a cloud of suspicion over my advice and writings on potato growing. This I wish to avoid. On the other hand, I think my friends will be wise to secure their supply of seed as soon as possible, for there is not a particle of doubt that potatoes will be scarce and dear next spring. If you want to try the Early Ohio next year, look for the advertisements of seed-potato growers in the issues of FARM AND FIRESIDE for February, March and April, or in those of other agricultural papers for the same period. Then write to the parties, asking for prices, etc., and secure your stock without delay.

MANURE.—I also have been a little too tardy in ordering my supply of manure from the stock-yards. The best of the manure (or rather, the kind I want and ordered; namely, fine compost, to be applied on the surface after plowing and to be worked into the soil only by means of the disk harrow, or pulverizer,) is probably frozen solid, and I will have to wait for it to thaw out. This manure costs me, delivered at our station here, \$16 per car, and I believe I am getting (whenever I do get it) a most excellent and cheap manure. There may be twenty tons to the carload. Even if the stuff averages only eight pounds of nitrogen, four pounds of phosphoric acid and eight pounds of potash to the ton, I get in the carload not less than \$36 worth of plant food. As long as I can strike such a bargain, I see no necessity of buying much concentrated fertilizer, in which the plant foods cost me not less than twice, and probably three times as much as I can get them for in the stock-yard manure. This opportunity of buying manure cheap is hardly appreciated by the farmers in this vicinity as much as it deserves.

FALL PLOWING.—Over-confidence in weather prospects is never justified. For some years our winters have not set in earnest until about Christmas, and I was so confidently expecting a repetition of such weather this year, that I have been much less in a hurry about my fall plowing and other fall preparations than it now appears was prudent. The vegetable garden, and especially the onion patch, should be plowed before winter. At least, that is what I like to have done, but cold weather came just in the nick of time to prevent the completion of the job. I only hope now we will have an open spell by and by, and a chance to finish my plowing. One of the chief objects of this plowing is the thorough surface drainage which can be secured by this laying off of the ground in narrow beds, with deep furrows between. This makes the soil dry out earlier in spring, and brings it in condition for working and planting a week or two before it would be in this condition without fall plowing.

RAISING ONION SETS.—Mrs. Anna E. L., of Chanute, Kansas, would like to grow a crop of onions for bunching, etc., from sets. The trouble is, our correspondent does not know where to get the sets. This should not be a difficult thing. Every seedsman advertises and sells onion sets; local dealers almost everywhere keep them in store. Prices, of course, vary in different seasons and different localities, just as with other garden crops. The yellow sets—usually Yellow Dutch or Strassburg—are best for general crops. Suppose, however, that sets cannot be conveniently had, or not as cheaply as desired. In such case I would grow bunch onions in my favorite way of sowing seed in frames in February, and transplanting the seedlings, when of pencil thickness, to the open ground. Under good management, and with proper selection of varieties, such as Yellow Dutch, Early Red

and Silverskin, the crop will be ready for bunching and market as early as from sets.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

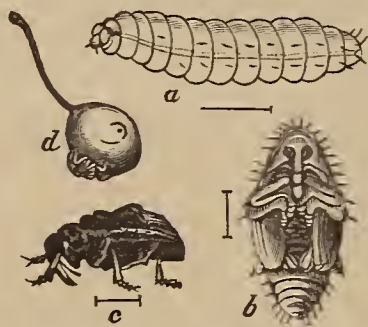
FIGHTING THE PLUM CURCULIO.

BY PROF. A. J. COOK.

BULLETIN NO. 66, MICHIGAN AGRICULTURAL COLLEGE.

The natural history of the plum curculio (Fig. c) is well known. The little weevil is hardly more than two tenths of an inch long. It is rough, with elevated, longitudinal lines, two of which, on the middle of the back, one on each side, are very prominent. The color is brown, dotted or lined with white and beaded with black. The two large humps are black, and rest on a black quadrangular spot. The beak is about the length of the head and prothorax and is bent under and back; the legs are brown, speckled and ringed with white; the femur or main joint of the legs is much thickened.

The curculio commences to visit the trees late in May, in central Michigan, or at just the time the little, dried-up circle—the calyx—is falling from the young fruit. By jarring the trees I have shown repeatedly that the curculio does not visit them at an earlier date. The insect now commences to feed on the leaves, and the female to lay her eggs on the fruit. The eggs (Fig. d) are always laid within a crescent, cut by the curculio, in the fruit. At the base of a little puncture within this crescent the egg is easily found. The insects continue to lay eggs till the first of July, by which time the beetles from the first-laid eggs begin to come forth. So that there is no time in the year when the beetles may not be found. During June, at time of egg-laying, the beetles often spend the day, especially early in June, when the weather is cold, concealed under clod or chips beneath the tree. Towards nightfall they seek the fruit, and may



THE PLUM CURCULIO.

walk up the trunk of the tree, or may fly from the ground to the tree. I have seen them going both ways.

During this egg-laying season the beetles feed on both fruit and foliage. It is generally true that imagos, or mature insects that are several days or weeks laying their eggs, take no little food. We see the curculio is no exception; the eggs are probably developing all through this feeding season.

Whenever the weevil or the limb on which it rests is jarred, the curculio draws up its legs and falls from the tree. This habit would of course be very valuable to the insect, as it would save it from hungry birds. It is very easy to see how, through the law of natural selection, this habit might have been formed.

As the eggs hatch, the footless grubs (Fig. a) pierce to the center of the fruit—plum, apricot, peach, cherry, apple or pear—where they feed and grow for about three weeks, when they leave the fruit, enter the earth to pupate (Fig. b). In a few days—about a week—the mature beetles come forth and await the following spring, which will furnish in the fruit of plums, cherries, peaches and apples a nidus for its eggs. Generally, the curculio does very little harm after July 1st. I think they never lay eggs to any extent after that date. They may, and certainly do at times, pierce the plums or apples even after this date, causing the former to rot, and the latter to become dwarfed and misshapen.

FIGHTING THE INSECT.

CHICKENS AND STOCK.—The habit of falling to the ground and a general timidity, gives us another method of combatting this enemy. Thus it is often found that by keeping a large flock of poultry among the trees, or even many hogs or sheep, a full crop of fruit can be secured each year. In this case the insects are

eaten up, trodden on or frightened away. I know of farmers who have in this way secured full crops of plums with almost no exception; while neighbors have secured no plums at all. Often a tree close by a door or path bears heavily each year, while others not thus situated suffer severely. Here the insects are probably frightened away.

PLANTING PLUM TREES.—As before stated, the pear, apple, cherry and often the peach can be secured against attack by planting numerous plum trees among the others. The curculios prefer the plums, and attack these in preference to the other fruit. I have seen cherries and apples saved in this way repeatedly, while orchards not far removed, with no plum trees, suffered serious injury. As our wild fruit trees are more and more cut down, this method will be more and more valuable.

THE JARRING METHOD.—With this method we can let the curculio work till the fruit is sufficiently thinned, when we can proceed to jar, and surely—no doubt in this method—save our fruit beautiful and sound. As we have seen, the curculio often spends the day on the ground beneath the tree. Jarring, then, must be done either late in the evening or very early in the morning—as late or as early as we can see to work. If in the evening, the early morning nap is not cut short, and the dew is not so troublesome. As we have seen, the time to jar is from the time the calyx falls from the tree—about May 20th, in central Michigan—till the first brood of weevils are all gone—about July 1st at this place. In rare cases it may be well to jar later if the punctures of the plums by the second brood are threatening, else the plums may rot because of such punctures. The number of times required to jar will vary; often it will not exceed ten to fifteen for the entire season. If, upon jarring, we find we get only one or two, or better, no specimens, we can then safely omit a day, and if the next jarring is equally fruitless, we may omit two days. If we jar each year, and gather and destroy the fallen fruit as soon as it falls, the work will, I think, be less and less each successive year.

The method of jarring is, in short, to place a sheet under the tree and give the tree, or in case it is quite large, each branch, a quick, sharp blow. The insects fall to the sheet and are easily gathered and crushed. The sheet may be mounted on one or two wheels like a wheelbarrow, in case of large orchards. The frame holding the sheet may be so made as to give the form of an inverted umbrella, and a narrow opening opposite the handles will permit the center of the sheet to reach the trunk of the tree. A cheaper, simpler and more common arrangement is to have two sheets on light, rectangular frames, which, when brought side by side, will form a square large enough to catch anything that may fall from a tree under which the sheet is placed. If each frame has a square notch in the center of one side they may be brought close together about the trunk of the tree, so that the sheets will surely catch whatever may fall. With two men to carry these frames and a third to do the jarring, the work proceeds with great speed. Less than a minute is required per tree. In case one has only a few trees and no help, the sheet may be square and slitted from the middle of one side to the center. Opposite this side it is tacked to a light, slender piece of wood, and opposite this it is tacked to two similar strips, each one half the length of the side. This makes it easy to carry the sheet, to place it entirely around the tree and to roll it up in case we wish to set it away in barn or shed. Of course, the sheet should always be large enough to catch all that falls from the trees.

The mallet with which we strike the tree or limb should be well padded and carefully used, so as not to wound the tree, or may be iron or wood unpadded, in which case a bolt or spike is driven into the tree to receive the blow. Sometimes a limb may be sawed off to receive the blow. I have used the padded mallet successfully for years with no injury to the trees. I find that I can fell all the beetles to the sheet with such a mallet. Unless we are very careful, however, in the use of the padded mallet, we may do serious damage to the trees. When two carry the sheet and a third party uses the mallet,

we may jar several trees before we stop to catch and crush the insects.

It is usually cool at the early or late hour, and the insects are rather sluggish and will generally remain motionless for some minutes. If one uses a sheet like the last described above, it is perhaps best to kill the insects each time after jarring. In case of the wheel-sheet, there is sometimes a box placed at the center and the inclined sheet makes it possible to shake the beetles from the sheet into this box. I am not sure but this is better in theory than in actual practice. The curculio may be brushed into a vessel containing kerosene, or crushed between the thumb and finger.

The expense of jarring will, of course, depend upon the excellence of the apparatus and upon the skill and quickness of the operators. Our largest and most successful plum growers in Michigan estimate the expense at about ten cents per tree. I inquired of several of our best pomologists and the estimates run from five to fifteen cents per tree per season. Surely, this is not an extravagant amount.

In conclusion, let me say that I believe it would pay all our fruit growers to set plum trees thickly among the other fruit trees of the orchard and then to fight this insect as described above. This will not only secure a fine and very profitable crop of this luscious fruit, but will, at the same time, tend to protect the other fruits from this scourge of the careless orchardist, with no extra expense.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Apple-Root Aphid.—B. H., Mammoth Spring, Ark. The knots on the roots are made by the apple tree root-louse. I have lately had cause several times to call attention to this insect. It is my opinion that throughout Missouri and Arkansas more orchards are destroyed by this pest than any other. The borer can be seen and so can most other pests, but because this insect is out of sight, on the roots, which are seriously attacked by no other insect, it is very seldom suspected. Then, again, it is very small, and a casual observer will pass it by and not notice it. There can be no doubt in the minds of those knowing the facts that there are thousands of apple trees set out each spring whose roots are infested at the time of setting. If the trees are properly cleansed, as recommended in these columns lately, before planting, there would be but little chance of their again being attacked. Some unscrupulous or ignorant nurserymen have been known to sell trees at reduced prices that were stunted by this insect. Such trees have the appearance of having their roots mouldy, but the apparent mould consists of innumerable small lice, and such trees are high at any price, unless the lice are first destroyed, after which they may make good trees.

Curran Tree.—E. B., Seybert, Ind., writes: "I would like to ask you a question about a curran tree. It is said to grow eight or nine feet high. There was an agent through here selling them, and he claims that the tree is patented by a man in New York state."

REPLY:—There is no such tree curran as that represented by your tree agent, and you may set him down as a man to "steer clear of." If any one should discover such a novelty as he represents this curran to be, it would be known all over the country in a short time, and the orders by mail could not be filled fast enough. You would not have to learn of the thing first through an agent, but it would be hailed with delight by all the people. There are what are called tree currants, but they in no way differ from the ordinary curran, and any curran may be pruned into the tree form. The way it is done is by rubbing off all the lower buds from the cuttings, leaving only the two upper buds and allowing only one of these to grow. By this means the cutting sends up a straight shoot, whose lower buds are rubbed off, thus giving it a tree form. Such form of pruning, while very pretty, is bad, because the borer will probably get into the stem, after which the plant will die, as it cannot sucker like currants grown without rubbing off the buds.

Best Varieties of Apples.—E. E., Orangeville, Ind., writes: "What are the best varieties of apples to plant for hogs in this section—southern Indiana? I want to set about one hundred trees on a limestone hillside with an eastern exposure. Please give the best varieties of winter sweet apples for this section."

REPLY:—I do not know of any variety especially adapted for feeding hogs, but think the best plan would be to plant your trees with the purpose of taking the best of care of them and selling all the first-class fruit and keeping all the poor fruit for the hogs. If a grower would always follow the plan of planting the best kinds, giving the best of care, and of marketing only the best, he would soon have for his fruit a very enviable reputation. Any of the first-class winter apples make good food for man or beast, but do not contain much of the muscle or fat-forming materials, though they are invaluable aids to health. Some of the rather acid-tasting apples may and do contain more sugar than some that are very sweet, and they only appear to have less sugar because they contain more acid than the sweet apples and the acid covers up the sugar. I would recommend you to plant Rome Beauty, Ben Davis, Smith's Cider, Wine Sap, and for a winter sweet apple, Talman Sweet.

DEAFNESS CAN'T BE CURED

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that we cannot cure by taking Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.
Sold by druggists, 75 cents.

Our Farm.

HYBRIDITY IN FRUITS.

A hybrid is a sexual cross between individuals of distinct species, a mongrel, as between the cherry and plum. It has generally been considered that the two parents of a hybrid must belong to the same family and genus; but later developments in the science seem to point towards an endless limit to hybridity, from forced unions between the species of genera widely distinct.

We have true hybrids between such widely different plants as wheat and rye, raspberry and strawberry, etc., and though these belong to the same families, they are certainly far enough apart, naturally, to show what may be done.

In flowers and plants greater wonders in hybridity have developed than in fruits, simply because the plants are more perfectly under the control of the operator, and from greater inducements and because results were more quickly obtainable. The manipulation of tree fruits in this line is long and tedious before results are obtained. When a hybrid is obtained between two fruits, it may prove barren, producing no seeds, and in that way ending our experiment.

What to expect from a hybrid race, as, for instance, between a Chickasaw plum and a common peach, is a problem that most persons well up in horticulture may think as yet unsolved. But for one, I feel confident that we have had numerous such hybrids in fruit every year for the last twenty years. I know that many will dispute the fact that Hale's Early, Alexander, Amsden, June, Garfield and many others of our very early peaches are peach-plum hybrids between the peach and Chickasaw plum; and that the Wild Goose, Blackman and many others are plum-peach hybrids between the same species. Yet one who has closely studied them, and has also studied the result of such sexual crosses between species, can find abundant proof that all of these fruits are true hybrids between these two species.

Before Hale's Early came upon the stage, the earliest known peach ripened August 20th, when the Hale ripened July 20th on its advent. The leaves of the Hale show unmistakable Chickasaw plum-leaf characteristics, and the stone also. Its leaves are nearly free from the parasitic fungi of the peach leaf. Its fruit is exceedingly liable to those peculiar to the plum, especially the one known as rotting of the fruit; and it seemed to be the means by which this dread disease spread to other varieties of peaches which had never rotted before. It was disseminated nearly everywhere as soon as the Hale was introduced, and fruited "peach-rot" prevailed. And several more obscure points could be mentioned, tending to prove it a hybrid.

Next comes the Alexander, so-called peach, which ripened its fruit nearly a month in advance of the Hale. If I were guessing, I would guess that the Alexander and all that family of very early peaches are hybrids between a peach, in all probability Hale's Early and the Wild Goose or some other very early Chickasaw plum, the peach flower that matured the fruit or seed from which the tree grew having been fertilized by pollen from the Wild Goose or other plum. Why? What proofs have we of such hybridity?

First, earliness of ripening, the fruit ripening to a day with the supposed plum parent. Its foliage resembles the Chickasaw plum leaf, and so far as I have observed, escaping entirely the peculiar leaf diseases of the peach. The shell of the seed of all these peaches is lighter in color than those of any other red peach, not nearly so much corrugated, or nearly smooth; and the seed itself and its outer envelope are more like those of plums.

But the most important point is that the cellular structure of the fruit pulp is very different from that of the peach, and almost exactly like that of the plum; also its ripening processes and decay. In fact, they have the exact characteristics that an expert in hybridity would expect to find in trees known to be true hybrids between these two species.

Further, I have long considered the Wild Goose plum a plum hybrid, or originating from a seed grown on a plum tree and fertilized with the pollen of a peach

flower, with the proof about the same as given in the foregoing case.

Further, I consider the Mariana plum a plum-cherry hybrid between a Myrobalan plum and the Early Richmond cherry. Of this there is a reasonable amount of proof to be found in the variety itself and the surroundings of its origin. I believed all of these to be facts, from my own experiments and observations, before coming here and seeing the many positively known to be hybrids, grown by Luther Burbank, of Santa Rosa, this county, and talking over hybridity with him.

I mention these here, and not those of Mr. Burbank's, for with the above-named fruits many of my readers are quite familiar, and from them can get a good idea of what we may expect from hybrids between our different species of fruits.

I wrote very nearly these same words (may I call them facts?) four years ago, and one of our leading horticultural papers would not publish them, and the secretary of a horticultural society threw them out, I suppose as the theories of a crank. And all of this thirty years after there were well known hybrids between species of grapes as distinct from each other as the peach from the plum, fuchsias and a thousand other annuals and florists' flowers and plants.

And now, to-day, the question among advanced experimenters in hybridity is not what two forms will hybridize with proper manipulation, but which will not, by forced pollination. D. B. WIER.

[To be continued.]

EXTRACTS FROM CORRESPONDENCE.

FROM NORTH CAROLINA.—Buncombe county is one of the most prosperous in the state. The county and its county seat, Asheville, have been on a boom for some years. Property near Asheville that will do for building purposes is bringing from \$100 to \$1,000 per acre. Asheville is the center of the western part of the state. It has one of the finest hotels in the South. It has six or eight other hotels and electric street railways and electric and gas lights, cotton, furniture, ice and tobacco factories. This part of the state is mountainous and noted for its healthfulness, cool summers and warm winters. The mercury hardly ever gets to 90° in the summer or to zero in winter. Good, cold, freestone spring-water is plentiful. We also have some mineral waters scattered through the county. The financial condition of the county is good. All claims are paid in full when due. We have a great many boarders in winter and summer, from the North in winter and the South in summer. George W. Vanderbilt has bought about six thousand acres of land nine miles west of here, and is working two or three hundred hands on it. He expects to spend one million dollars in improving it. The rock foundation for his residence will cost about four hundred thousand dollars. He has paid from \$25 to \$1,000 per acre for his land. We have a beautiful valley with the Swannanoa river running through, and mountain peaks of varying heights on all sides. We can grow all kinds of grains, fruits and vegetables, except those of extreme southern and northern climates. Apples, cabbages and Irish potatoes grow well. All lands are not very rich, but can be brought up to produce extra heavy crops. They can be bought from \$3 to \$100 per acre, according to location. Corn is worth 50 to 60 cents per bushel; chickens, from 10 to 25 cents per pound; butter, from 15 to 35 cents per pound; apples, from 50 to \$1 per bushel; Irish potatoes, 40 to 75 cents per bushel; hay, from 50 cents to \$1 per hundred; cows, from \$20 to \$75.

Cooper Station, N. C.

R. L. P.

FROM CALIFORNIA.—San Jose is the garden spot of America. I had to smile at an article about a farmer in New Jersey, who got such a big price for his peach crop and how he had to guard the same with shotguns. Why, if those poor, benighted people back East would come out to our beautiful Santa Clara valley, they could get all they want without the dangers of a shotgun. I know places here of only one half acre, on which is a house and outsheds and nice flower garden, making \$300 to \$350 clear, besides having all the fruit they want for their own family use. Very many people from the middle and eastern states, when they learn that the price of our lands, unimproved, is from \$150 to \$300 per acre, and full-bearing orchards from \$500 to \$1,000 per acre, they are paralyzed. They pay from \$50 to \$100 per acre for good lands within a few miles of a prosperous town. Compared with these figures, our prices do seem very high. But the test is, what do these different lands produce in the way of incomes? A test to which few people who have these cheaper lands are willing to apply. They are, as a rule, fortunate if they net \$10 per acre, which is 10 per cent. Lands here, in orchards, at from \$500 to \$1,000 per acre, have on them valuable fruit trees, which have cost considerable money to set out and care for. These lands yield from \$100 upwards (I only whisper it, but I know of over \$500, net, per acre), besides the great amount of saving

in labor, compared with eastern farms. I have four acres in peaches and apricots, on which this year was only a light half crop, but still it netted between \$1,100 and \$1,200, or nearly \$300 per acre, a sum far in excess of what the majority of eastern farmers would make on one hundred acres, and work hard all year to do it, too. This land cost \$600 per acre, and is almost in the city. Of course, a little further out, land would be much cheaper. Land here is not inflated as it is up north.

San Jose, Cal.

G. A. S.

FROM TENNESSEE.—Owing to the booms in our neighboring towns and cities, farm produce is going up fast. New corn is worth 60 cents per bushel; oats, 40 to 50; wheat, \$1.15 to \$1.25; Irish potatoes, \$1 to \$1.25; sweet potatoes, 60 to 65; butter, 20 to 25 cents per pound; eggs, 20 cents per dozen; hay, \$18 per ton. If anyone doubts the existence of our boom, he can be easily convinced by hearing the music of the hammer and the saw everywhere, and seeing thousands of men and teams employed in grading streets, building houses, etc., in our towns; and the train-loads of lumber and logs. We have iron ore, coal, lime, timber, etc., all close together; railroad and river transportation through our district. Land is going up fast. A steady stream of northern immigration is pouring in. We have had a beautiful winter so far, frost every night and regular midsummer days, a genuine Indian summer. On the opening of spring we expect a bigger boom than ever. Everybody is welcome. There is room for all here, where we have a beautiful climate, good health, free and unmolested speech and vote and expression of religious and political opinion.

G. C.

Lorraine, Rhea county, Tenn.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

GOOD WORDS FROM OUR SUBSCRIBERS.

PITTSBURG, PA., November 6, 1890.

We received your beautiful picture, "Christ on Calvary," and are greatly pleased with it. As a work of art it is superb, and I cannot thank you enough for sending it.

MRS. J. NELSON.

WASHINGTON, IND., November 4, 1890.

The pictures, "Christ Before Pilate" and "Christ on Calvary," to hand. I am very much pleased with them. They are greater than I expected.

JOHN W. HEALY.

ORLANDO, ARK.

I received the picture, "Christ on Calvary," in good order, and it is all you claim for it. I would not take Ten Dollars for it.

REBECCA SIMMONS.

PAINESVILLE, OHIO, December 4, 1890.

We received both pictures, "Christ Before Pilate" and "Christ on Calvary." We are very much pleased with them. We send our many thanks.

N. A. WRIGHT.

SEGUIN, TEXAS, December 5, 1890.

I received your picture, "Christ on Calvary," in good shape, and many thanks to you. I would not take Five Dollars for it, and thought it so good I sent it at once to be framed. All of your premiums are worth working for.

LIZZIE BELL WILLIAMS.

SWEET HOME, TEXAS, Oct. 9, 1890.

The sewing machine gives great satisfaction, and we are very much pleased with it.

A. H. HARNDEN.

MORRISVILLE, N. Y., December 5, 1890.

Allow me to present my thanks for the beautiful painting, "Christ on Calvary," which I received promptly. In regard to the picture, I will say that it is truly a fit companion to that superb one, "Christ Before Pilate," which I have incased in a lovely frame, and which has been greatly admired. And when I shall have this hanging by its side, I shall feel, as I look upon the grand paintings, as if the presence of my Divine Master permeated the room I have set aside as a sort of shrine for my household idols.

MRS. HELEN J. ATWOOD.

ROUND HILL, CONN., Nov. 14, 1890.

I received your beautiful picture, "Christ on Calvary," and it is the most beautiful picture I ever saw. I am well pleased with it and would not take a good deal for it.

SARAH HORTON.

JEFFERSONVILLE, OHIO, Oct. 25, 1890.

I received the picture, "Christ Before Pilate," in good shape, and would not take \$5.00 for it, if I couldn't get another just like it.

MAGGIE E. WITT.

TIPTON, MO., November 7, 1890.

I received your high-arm Singer sewing machine, and think it is nice for the money. It is much nicer than I expected it to be. It is just as you recommended it to be. The freight on it was only 70 cents. I thank you for sending me such a lovely machine.

PAULINA SCHERER.

MIDDLETOWN, N. Y., Nov. 2, 1890.

The sewing machine arrived and is just as represented to be. Please accept my thanks. Will do all I can to recommend your paper to friends.

E. DUNNING.

BELMONT, LA., Nov. 10, 1890.

I received your premium sewing machine last April, and am well pleased with it. It is all right.

M. J. TYLER.

LAWRENCE STATION, N. J., Nov. 10, 1890.

Please accept thanks for the beautiful pictures, "Christ Before Pilate" and "Christ on Calvary." They are very much admired. I appreciate them very highly.

JOHN F. ROBBINS.



SEEDS 6 pkts. Flower Seeds, 10c. 5 pkts. Vegetable Seeds, 10c. Full size pkts. All different, 1000 agents wanted at \$5 a day, either sex. Catalogue Free. F. B. MILLS, Rose Hill, Onondaga Co., N. Y.

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Unless every family in your County is already supplied with this invaluable

utensil, write for our confidential terms immediately before another lips in

ahead of you. Address **WILMOT CASTLE & CO., ROCHESTER, N. Y.**

Our Fireside.

INSIGHT.

On the river of life, 'as I float along,
I see with the spirit's sight
That many a nauseous weed of wrong
Has root in a seed of right.
For evil is good that has gone astray,
And sorrow is only blindness,
And the world is always under the sway
Of a changeless law of kindness.

The commonest error a truth can make
Is shouting its sweet voice hoarse.
And sin is only the soul's mistake
In misdirecting its force.
And love, the fairest of all fair things
That ever to men descended,
Grows rank with nettles and poisonous things
Unless it is watched and tended.

There could not be anything better than this
Old world in the way it began.
And though some matters have gone amiss
From the great original plan;
And however dark the skies may appear,
And however souls may blunder,
I tell you all will work out clear,
For good lies over and under.

—Ella Wheeler Wilcox.

On Bohemia's Border.

BY DOROTHY LUNDI.

CHAPTER V.

It was her first moment of leisure that day, and Helen, whom the manners and customs of the world at large troubled very little in the way of suggestions of precedent, seeing by the Arlington street clock that she had at least a half hour before she was due at home, sat down on one of the old stone benches, and gave her weary

sense to a deep and quiet enjoyment of the autumn twilight. Behind the irregular line of the beautiful old Beacon street houses the sunset fire was just fading down; the sky above showed a broad reach of that rare and exquisite color of which northern skies in October alone have the secret; pure, soft, glowing, holding in itself, yet not revealing all the tenderness of rose tints, all the majesty of gold; that clear, faithful, passionless color which tells to those who have eyes to see, the secrets of the Spirit of the North.

Two or three great stars were glittering through the dusk. Dim and delicate above the sharp whiteness of the electric lights, just kindled on the public garden, there was the thin crescent of the new moon. The keen but friendly wind kept the fallen leaves on the wall busy in gusty play; the pungent autumn odor of them was strong in the air. The dear and homely peace of the twilight hour, which "brings a home," was upon even the restless world of the crowded city.

From where she sat Helen could see the ceaseless hurry of the crowd down the flagged walk to the Park Square station; a pleasant hurry, as of men eager to be at home. And there was a pleasant look, or so she fancied, of anticipated content on the faces of the rarer passers by the Charles street mail. Plainly dressed women, some of them carrying the little, black bags which hinted of work-apron and scissors and dressmaker's charts; yet walking briskly, too, with a suggestion of the little home-room to which they were hurrying. The room Helen amused herself with idly picturing with an ingrain carpet in squares of red and green, a bird-cage in the window, and on the sill without the milk-can, in which cream had been rising all day, for the cup of tea presently to be brewed in the little pewter tea-pot.

"It feels a trifle lonely," said Helen to herself, with a little smile and shiver, "but I shall have a chance to test it for myself after next week.

"Bah! what ungrateful nonsense! It will only be plunging a bit deeper into Bohemia for one winter, and that I've always wanted to do. I'll make Max take me to dine at Marlaine's three times a week. I'll work up the local color for that story of 'Footlight Friends,' that's been buzzing through my brain these three months. I'll give myself a holiday, and explore those historical corners of old Boston we've talked so much about and never hunted up. I'll do two or three famous tales before Lois comes back, and perhaps come to such glory that 'My sister, Miss Dowlas, will be quite a personage in Mrs. Caird's drawing-room.

"Bless me, when I 'remember my mercies,' there's nothing to grumble about in spinsterly isolation for a year, in Bohemia. And oh, the unspeakable comfort of knowing that my girl is happy, and has at last what I could never give her, the sheltered, calm life she loves best, where everything is usual and acknowledged and safe. Strange that we should be so

different, and strange that I should have been too selfish, for so long, to admit the difference. Max was clearer-sighted than I. What a comfort it is to have a friend like Max. It is an anchor for one's life, among all the changes of things.

"They say youth is the best thing in the world; but I wonder if it isn't better, after all, to find one's self just touching middle age, with ambitions growing by achievement, with sure, ripened friendships."

She felt a sort of sudden glow of warm and quick content; her life had never seemed to her a safer, better thing, more happily worth living, than at that moment. The wind came scurrying down the mall, with a colder breath caught from the coming night. She had been sitting idle too long in the autumn dusk; a light shiver ran through her and she rose hastily, wrapping her cloak more closely about her.

"My good woman," said a voice close beside her, with an accent of grave impersonal philanthropy, "you seem to be cold, and are far too thinly dressed for such an air as this. Will you accept my overcoat?"

She had started at the first word, but she was laughing merrily as the voice concluded its benevolent speech.

"Well, you certainly did startle me, Max," she said, "and moreover, you certainly can evolve impertinent speeches with a quickness which amounts to genius."

"Impertinent? I never was more serious in my life," said Dr. Ainsworth, falling into step beside her. "Now that we've gotten Lois

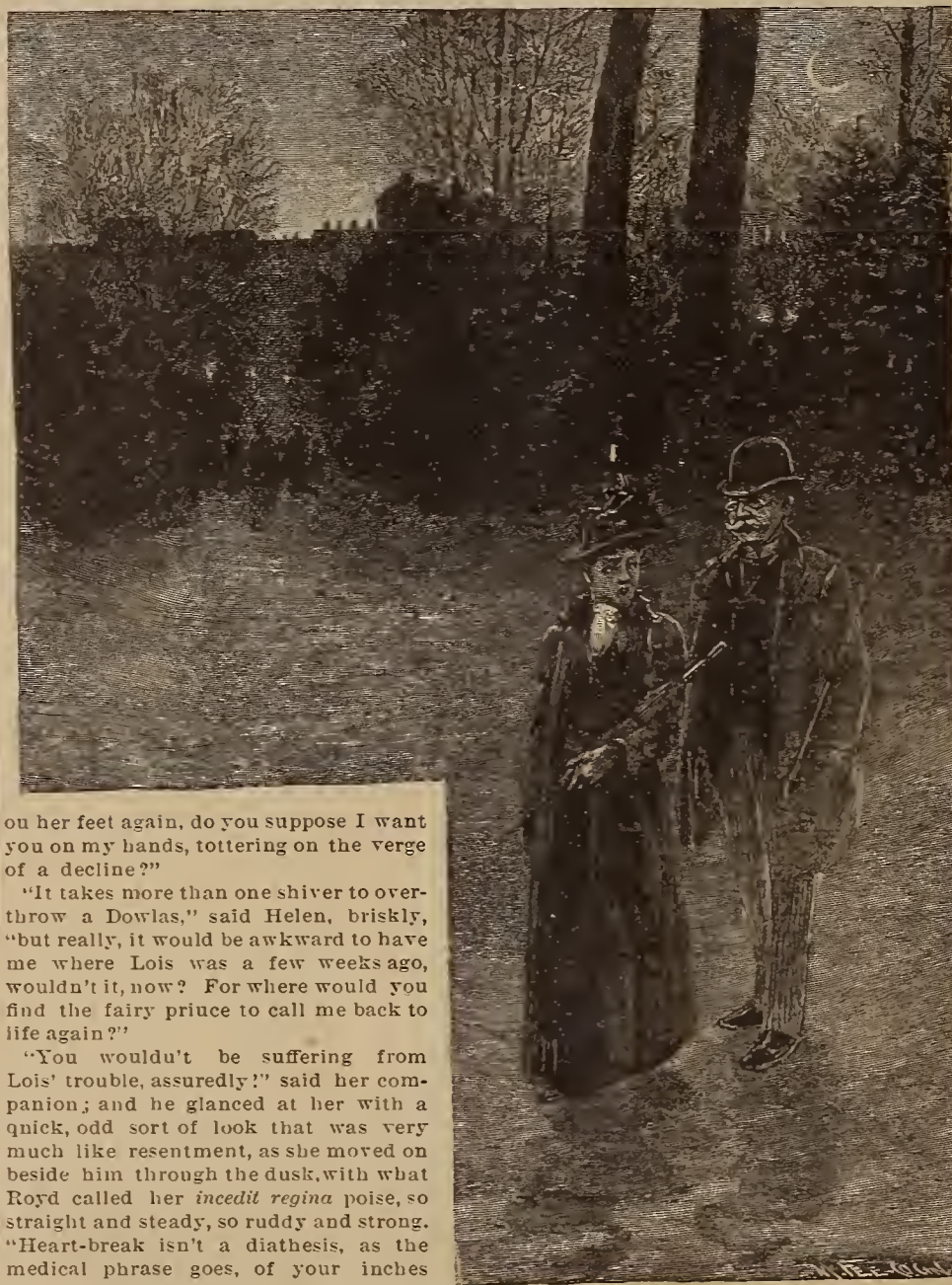
for a minute, and then it came to me, as I told you, that whatever one may miss, one is never truly lonely who has ambitions and old friends."

It was a brave and a womanly face she turned toward him; and with an impulsive gesture very characteristic of her, she stretched out her hand toward him with a gesture full of affectionate confidence, as she said "old friends."

He clasped it, warmly and heartily; and then, for it was quite dark now, and they were crossing the crowded Park Square mall, with the hurrying crowd jostling them to right and left, instead of releasing her hand, he slipped it within his arm, as they went slowly on together. There had been a little silence, and then:

"Nell," said Dr. Max, and she felt rather than saw, that he seemed to pull himself together and square his shoulders, as if he were facing something not quite easy to be done. "Nell, you've been too busy to look about you much; and I dare say you haven't noticed that Royd and you are not the only ones affected by your 'contagious domesticity.' Why, it has worked upon me to that degree that I—"

There was an odd, strained, embarrassed note in his cordial, steady voice. A sudden, electric sense of something unforeseen, of something at war with all the safe and warm content of her mood, came to Helen Dowlas, with a tightening of the heart that was like a physical pain. All in that strange moment, the unfamiliar tone in the voice she knew so well, the down-



on her feet again, do you suppose I want you on my hands, tottering on the verge of a decline?"

"It takes more than one shiver to overthrow a Dowlas," said Helen, briskly, "but really, it would be awkward to have me where Lois was a few weeks ago, wouldn't it, now? For where would you find the fairy prince to call me back to life again?"

"You wouldn't be suffering from Lois' trouble, assuredly!" said her companion; and he glanced at her with a quick, odd sort of look that was very much like resentment, as she moved on beside him through the dusk, with what Royd called her *incedit regina* poise, so straight and steady, so ruddy and strong. "Heart-break isn't a diathesis, as the medical phrase goes, of your inches and color and your—"

"My years?" Helen interrupted, laughing. "Oh, say it. I don't mind. I've been saying something a little like it to myself, as I sat on the bench yonder; saying to myself that middle age wasn't a half bad thing to face, when it brought wide interests and living ambitions and tranquil, safe, tried, old friendships."

"And what had you been saying to yourself," said Max Ainsworth, speaking a trifle more quickly than his wont, and again glancing at her with a look less easy to translate than the frank and friendly ones he was wont to cast her way, "that you make such an eminently sensible argument in reply?"

"That's a lawyer's question, Max, not a doctor's," Helen said, and she flushed lightly, through all the healthy glow the keen wind was bringing to her cheeks. "But I don't see why I shouldn't answer it. I suppose what Mark Royd calls the 'contagious domesticity' of the atmosphere at home, lately, has affected me more than I know, until I had a quiet minute, like that one on the bench yonder, to realize it in. When one feels what it is like to be happy as Lois is happy, then one sees the seamy side of independence—and that is loneliness, you know. I suppose I never should have gotten so romantic—I, at my age, Max!—if I wasn't to be quite alone when Lois goes. In most homes, when a sister is married it is a ripple in the home life, and all is past. But with us it—it is a sort of shipwreck. Without Lois to plan for, I felt, for just a moment, 'Othello's occupation's gone.' But it was only

cast look in Dr. Max's frank and manly face, the sense with which, as by some dark magic, all the air was full of coming surprise and change and loss.

Helen felt that, with no breath of warning, that friendship which she had called in her thoughts "the anchor of her life," had slipped its safe hold, and she was adrift on some cold and misty sea. Not quite knowing what she did, she caught her hand from his arm and moved, with a curious weakness and aimlessness in her step, away from the hurrying crowd, toward the dark, quiet, grassy spaces that stretched away from the lighted pathway.

Dr. Ainsworth followed her hurriedly, a little anxiously, and with an utter absence of self-poise and steadiness, which was as strange in him as in her.

"Nell," he said. "Why, Nell, what is the matter? I said nothing."

"No," she answered, quickly, and it was easy to see she was struggling to regain the self-command that never before in all her life had so suddenly been treacherous to her. "No, it was not anything you said, Max. It was something that came, all in a moment, into the atmosphere between us. It was something you mean to say, Max, and will you say it quickly, because I know it's to surprise me, and I do not want time to wonder if it will hurt me, too."

They moved slowly together across the dim-lit grass. It seemed to Helen that the world and the life of it had suddenly withdrawn

itself to some great, impossible distance, and that the night about her was another night than any she had ever known, a night without stars, and out of whose shadows uncanny things might come. She noted again, though quite unconsciously, that Dr. Max, before he began to speak, repeated that odd movement, as of bracing himself against something hard to meet.

"Nell," he began, once more, "it's just here, you've said it for me. I've been realizing lately, in the atmosphere of Archie's and Lois' happiness, that the seamy side of independence is loneliness. I am thirty-eight years old, Nell, and when I go home at night there's nobody but my old dog to welcome me. Ambitions, friendships, they're good things, as you say, Nell; but after all, they stimulate one, they do not feed one. I've owned the truth to myself lately; I want a home. I want something to hold to so closely that the winds of the world can't blow us apart. I shouldn't have realized it so soon, perhaps—though every man must feel it first or last, I think, Nell—if your home, which has been almost mine, wasn't to be broken up."

"Max!" she cried, her voice sharp with a bitter hurt and reproach, "Max, is the home then broken up for you because Lois is gone, while I am there?"

"Nell," he said, more steadily and in his old fashion than he had yet spoken, "even in Bohemia, could I come when you are alone there as I came when Lois and Mrs. McCossatt made it a household to come into, and not as it would be presently, merely one woman to visit?"

It was cruelly plain speaking, but Helen Dowlas took plain speaking always as respect.

"I had not thought of that, Max," she said, and there was a strange note of humility sounding through the pain in her voice. "It is strange, but I had not once thought of that. Even in Bohemia, as you say, you could not come as you have come. And"—her voice was almost within her control now—"I am so glad you remembered so well that to have a friend in any way different is worse than to lose him outright and altogether, to me."

"But I do not mean you to lose me outright and altogether," he said, and there was a cheeriness in his voice that brought to her a sharper hurt than all its former oddness and embarrassment. "Because a man has a home, does it follow its doors are closed on his old friends? I mean you in the new days to be oftener in my drawing-room, please God, Nell, than ever I was in the studio in the old days."

A sort of rage at what seemed to her the stupid heartlessness of a Max Ainsworth she had never known, shook her from head to foot; she laughed, but it was not a pleasant laugh to hear. But as if he had not heard it, he went on:

"Not that I have any right yet to talk about my drawing-room or my home; for they are nothing on earth, yet, but a dream. But you know the lease of the old house on Mt. Vernon street, that my uncle left me, expires this year. And this is what I have been dreaming about. Not to relet it, but to move into it; to restore it a bit here and there, but keep the old-fashioned look, I hope; and—it's safely enough away from Philistia and the court end of the town; and most of my practice lies thereabouts."

"Considerations that would be likely to appeal to Mrs. Ainsworth, I should judge," said Helen, with courageous irony.

"Mrs., eh?" said Dr. Max, a trifle taken aback, and then laughed. "Oh, I have flattered myself that if Mrs. Ainsworth honored me by taking my name, she would oblige me by sharing the home of my choice," he said. "But I have told you, Nell, it is only a dream and a hope. I am so little sure that I couldn't even hazard a guess upon it, whether the one woman who will ever be Mrs. Max Ainsworth and make that old house home to me, will answer me yes or no."

It was not with a very steady voice, but it was with a very sweet and kind one, that Helen Dowlas answered him.

"If she is a woman worth you, Max, and you give her time to know you as you are, I do not think you need fear what her answer will be," she said.

"How can you venture that, Nell, when you do not know her name?" said Dr. Max, and he asked the question with an odd sort of whimsical wistfulness.

"But are you sure I do not know her name? I have not believed, I will confess that, the laughs and whispers that have been in the air for a month or two; but I have heard them," Helen answered. She tried to speak lightly, but her voice sounded to herself dry and cold.

They were at the corner of Roscommon Place. The clock was striking six, and Dr. Max tried to speak with his old, pleasant briskness as he cried:

"Bless me, Nell! I had an engagement for

For Throat Troubles

croup,
whooping cough, and
loss of voice,
the best
remedy is

Ayer's Cherry Pectoral

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

fifteen minutes ago, and I can't stay with you another second. But—but now I have told you so much, I can't wait to tell you the rest. May I come up when I am at leisure to-night—It won't be later than ten—and have an old-fashioned talk with you, and tell you her name, and—and I have a fancy, for you have raised my courage by that good word of yours, Nell, that I shall be able then, perhaps, to tell you her answer. May I come? It is not many more of our old-time talks by the studio fire that we can hope for, now that the breaking up is so near."

It was not like Dr. Max's thoughtfulness, that though he was looking at her very closely as they stood under the doorway lamp, he said nothing of the weary pallor of her face, or the unwonted shadows under her kind and keen, gray eyes. Perhaps there possessed him, for the moment, that strange, selfish oblivion which dims the thought of old friends in the heart of even the best man, when the heart is full of dreams of more intimate happiness.

There was a pathetic wistfulness as of an appeal from the new Max to the old—a look that set oddly on her strong and bright face—as she turned to him.

"You know you are always welcome, whether you come early or late," she said.

She went slowly upstairs, very slowly, with a curious feeling that she was short of breath and the distance was long and hard to climb. On the landing just outside the door she paused, catching the soft clatter of china and glass and the sound of Lois' low laugh, and later, a few words in Royd's gay voice. She had a sort of consciousness, as of one standing apart and watching herself impersonally and uninterestedly, that it was not her old self whom the tide of this familiar life was pulsing out to meet; not her old, steady, merry, practical self; but a tired woman, inelastic in thought and movement, who felt herself lonely and old.

She pulled herself together suddenly, and stood up straight. "Helen Dowlas," she said, "we'll talk this out together by and by, we two."

The bitter pathos of Brutus' words as he passes Cassius' body without lament, echoed through her thought:

"I shall find time, Cassius, I shall find time."

"But the time is not now. Can you, who have preached to Lois, practice? Let me see what your pride is worth, and your self-control you are so proud of, and your good sense. By and by you shall look the fact straight in the face that Max Ainsworth is going out of your life as Lois has gone; but not now—now—"

Then she opened the door and went in. They crowded to meet her, with laughing reproaches and ridicule of her lateness. Mrs. McCossatt reminded her, with severity, that tea was set for a half hour earlier than usual, since Archie was to take Lois that evening to bid good-by to Mrs. Griswold, who, with Carroll, started to-morrow on her sad pilgrimage to a little town across the sea. Tea was over now, but she could pick up a monthful, if she liked.

She did not like, Helen said; she had not been so tired for months, she believed. It was the just punishment of vanity, she told Royd, who came to sit beside her when she had forced herself to drink the tea Mrs. McCossatt had reluctantly brought her, and had seated herself in her fireside chair, drawing up a low basket, heaped with some heavy, white drapery.

"It is all wretched vanity which is bringing down my gray hairs in sorrow to a headache!" she said to Royd, and she noted, with that same curious, double consciousness she had had for hours, that her voice sounded quite like itself, and matched her light words and not her heavy heart. "For did you know, Mark, that I had spent the livelong afternoon at the dressmaker's?" she said, and she acknowledged his melodramatic raising of hands and eyes to heaven with a little laugh. "You see that we have met the Phillistines and we are theirs, so to speak. Now, I had taken for granted that for a quiet morning wedding, such as Lois' is to be—just into church and out again, and a quick drive over to the steamer—it would be quite sacrifice enough to the Grundys if I wasted my substance in having the one great and original black silk gown cleaved at Lewando's, instead of doing it up myself, with soap-bark. But nothing would do but a shining new garment, if you please; and when one undergoes the awful experience of fitting for the first time in twenty years or so—"

"You are worse than Phillistine, Nell," said Royd, "you are domestic." He touched her right hand lightly. "That ever I should live to see you using a needle!"

"Calm yourself, it is a sail-needle. The cover of Lois' trunk was suffering a dissolution of continuity, and Janet kindly trusted me with the contract of repairing it, stitches being less an object than solidity."

And so the idle talk went on about her, and she bore her part in it fully and bravely, throwing now and then a bit of humorous counsel to the table where Lois and Archie, with countless maps and guide-books, were making the thousandth change in the itinerary of that year's happy foreign wandering which was to begin so soon; pacifying dear Janet McCossatt's wrath under Royd's impertinent chaff as to whether 'the widdy at Windsor' was expected to turn out the 'Orse Guards on the visiting of London by its ardent worshiper, for it was settled from the beginning that the time had come for the dear

old lady to make the pious pilgrimage she had been planning for thirty years, now that service to Lois could be reconciled with that long dreamed-of pleasure; laughing with the rest at Royd's solemn assurance, when theatre hour called him away, that their 'ev'ingly atmosphere of mutual affection had so worked on his better nature, that he had threatened his manager with breach of contract unless he was cast in the next piece, not as villain, but as virtuous hero.

"For my loungings are unspeakable," he said, "to have the curtain fall on me, but once, clasped in the arms of virtuous affection, instead of, as usual, led off in irous, R. U. E., by triumphant detectives."

It was over at last; the stralu of the talk and laughter. Royd had gone, and a little later Lois and Archie were on their sorrowful little farewell visit to poor Aunt Harriet, who had given Lois a tender welcome among them, though she could not delay her "going to Phillip" for even the few weeks until the wedding day. "And I should but come as a shadow there, dear child," she had said. Mrs. McCossatt had begun to pack her box on the first intimation of her accompanying Lois, and unpacking and repacking the same had been the absorbing occupation of all her subsequent days and nights. To her bed-room and her box she now betook herself accordingly, and Helen was alone.

She drew a long breath of relief, as she threw down the work with which she had been busying her unsteady hands; and with the gray and weary look her resolute smile had banished, coming back again to her face, she crossed to her bed-room and shut the door. As she had looked into her mirror that hot, August night two months ago, "to see how Helen Dowlas looked with a happy face," so, in the clear and merciless light of her lamp turned up at its height, she questioned Helen Dowlas' face with another look upon it, and read from it, unshrinkingly, bitter truths.

She noted the many threads of gray about the temples; the lines of thought and care at eyes and lips; the little hollows and fullnesses that at cheek and throat had stolen away the firm and lovely contour of first youth.

Without the lightness of content which lent it comeliness, it was not a beautiful face; only a strong and true and weary one. And looking into its courageous eyes, she "thought it out."

Well, it was past, and it was her last illusion. It would be a hard wrench to give it up; she had not known how that one illusion had reflected upon her life most of the rose-color that strenuous life could boast. But the life would not go bare. The gray of duty and the purple of ambition would clothe it all ways.

She had outlived too much in her years, not to know that most things can be outlived. Life could be interesting when it ceased to be happy. There would be something always to win, something to struggle against, something to smile over—but would she ever smile over a joke she could not share with Max?

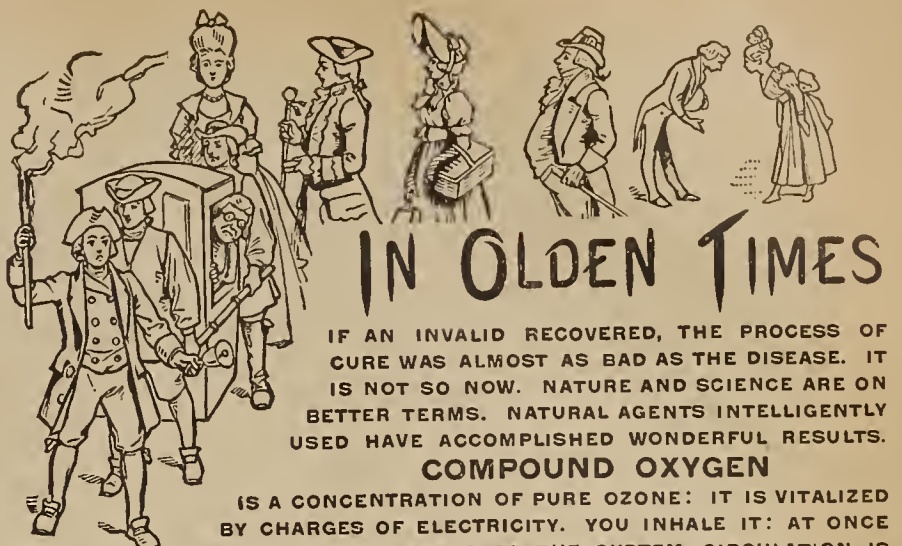
It was like Helen Dowlas that the first tears she had shed rushed burning and stinging to her eyes, as she asked herself that question. All the consciousness of the thousands of tiny threads of congeniality, of habit, of confidence, of entire mutual trust and comprehension and loyal affection that for over twenty years had woven her life to Max Ainsworth's life, and which must be broken now, one by one, and the breaking of every one a separate pain, pressed down her heart with a stifling pressure that was misery beyond any she had ever known.

She dashed to her feet; the striking of the clock warned her that he might be here at any moment now, and she would sooner the news of her death should meet him than a sight of that white, woful face the mirror had showed her. Who shall say where in the next half hour she sought and found comfort and self-control? Was it the fierce flinging against her face of waves of water, pungent with some eastern essence, that could subtly steal away the stains of tears? Was it from the autumn sky, thick-strewn with keen and glittering stars, which she stood watching from between her parted curtains later, with the light turned low? Was it from that moment spent on her knees by her father's old chair with hidden face?

That is not told; but when Max Ainsworth came into the studio as the clock marked three quarters after nine, she rose from the seat she had chosen, well back in the shadows of the chimney corner, and greeted him with an outstretched hand whose clasp was warm and cordial and steady. It was not she who was so discomposed that the old familiar, friendly talk and silences were out of the question. It was not she who wandered restlessly about the room, fingering this bit of bric-a-brac and that, and going suddenly hot all in a moment and opening the lips as with an intent to say something of consequence, and closing them again with a sort of shame-faced, nervous laugh.

No, it was grave, tranquil, self-possessed Dr. Max who did all these odd and awkward things; and through all the queer little aches at her heart, Helen felt a certain quaint, irresistible amusement at seeing him do them, which did more than anything else could have done to give her back quite to herself.

"Max," she said at last, very kindly and simply and naturally, "Max, I have been thinking over what you said this afternoon. It took me by surprise, because I had been,



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as you said, absorbed in my own matters. And I had been stupid, when others were saying how good a wife Emily Westborne would make you, in forgetting that a man does not judge the woman he marries by the same standards he applies to women when he is discussing them impersonally with his friends."

"Nell," said Dr. Max, his nervousness gone of a sudden, as he sat down beside her and spoke with something like his old, amused smile (though he had started, too, markedly enough, when she mentioned Emily Westborne), "are you aware that what you have just said is not exactly complimentary to the young lady in question—if you mean, as I suppose you do, that because I am in love with her I overlook the fact that she could not meet my old ideas?"

"I—I did not mean to be rude, Max!" she cried, and she flushed, distrustfully. "All men are like that; it is only that I was so stupid in thinking that you might be an exception. Men do not think of looking for the large, human qualities in a wife which they look for in a friend; it is enough that she—"

But he interrupted the little disquisition. "But perhaps I am not an exception, after all," he said. "I flatter myself that there is not a quality I value in a friend which my wife that is to be—if she is to be—does not own."

She thought of Miss Westborne's little, omnipresent smile, and looked at him and was helplessly silent.

"I might be so infatuated as to say that, if I were speaking of Miss Westborne, whom in the inscrutable decrees of Providence I have no idea whatever of marrying," he went on composedly; "and I really don't know what you have ever seen in me, Nell, to make you credit me with a longing to espouse a marionette."

She looked at him breathless, bewildered, her color coming and going.

"But, Max," she gasped, "I never heard your name associated with any other woman's in my life. Who—who—"

"My dear Nell, your who-whos are worthier of an owl than of—excuse me—a goose." He laughed a sudden, low, glad laugh, and then he reached across the table and picked up something that reflected back the firelight from its surface of dulled silver. "I will do better than tell you the name of the one woman on earth I shall ever ask to be my wife; I will show you her likeness," he said. And then before Helen Dowlas' amazed, flushed, wondering face, he held Lois' little mirror.

She never quite knew what happened in the next few moments. She knew that a great peace, like a flood of sunshine over a rain-beaten and wind-torn world, was folding her in and warming her to the heart, and that both her hands were fast in the hands of her life-long friend, in a clasp of perfect trust and loyalty; she knew that all that pain of losing her life thread by thread from his, which she had schooled herself to bear, was never to be borne, but that those threads were instead to weave themselves into one supreme tie, blessed and abiding.

"Max," she said, "oh, why did you let me get such a fright and such a misery? You might have known," said Helen Dowlas, with a candor wholly her own, "that I had a thousand times rather marry you than lose you altogether!"

He broke into happy laughter.

"Oh, but that is a tender acknowledgement, Nell!" he cried. And then, sitting together in the firelight, in great and sweet content, he told her with a frankness mating with her own, that he had never realized his own heart toward her till he had realized the inevitableness of the breaking of their old, close, simple intimacy by Lois' marriage. "And when I saw how my whole life was bound up with yours, Nell," he said, "I trembled to say

words that might bring us together or might send us apart, for I knew you had never given me one lovelike thought in all your life. And it came to me that the only possible way was to let you, as I had done, first face what it would be to us to be apart."

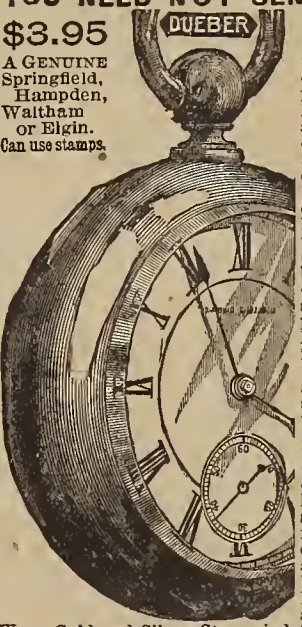
"It wasn't very kind of you, Max," she said after a little silence. "But I can see how it was wise. For if you had asked me to marry you, point blank and on an unprepared mind, so to speak, I think," she mused aloud, with all her old, fatal honesty, "I should probably have told you that your brain was weakened from overwork and you needed rest and a tonic. But I *did* face what it would be for us to be apart," and oh, Max—Max—"

The tears that were so unfamiliar to him in his long years' knowledge of her brimmed and overflowed her gray eyes, as she raised them to his. And he took her in his arms and kissed her.

[THE END.]

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Our Household.

A BALLAD OF EAST AND WEST.

KAMAL is out with twenty men to raise the border side,
And he has lifted the colonel's mare that is the colonel's pride
He has lifted her out of the stable door between the dawn and the day,
And turned the calkins upon her feet, and ridden her far away.
Then up and spoke the colonel's son that led a troop of the Guides:
"Is there never a man of all my men can say where Kamal hides?"
Then up and spoke Mahommed Khan, the son of Rissaldar
"If ye know the track of the morning mist, ye know where his pickets are.
At dusk he harries the Abazal; at dawn he is into Bonair;
But he must go by Fort Monroe to his own place to fare—
So if ye gallop to Fort Monroe as fast as a bird can fly,
By the favor of God ye may cut him off ere he win to the Tongue of Jagai.
But if he be passed the Tongue of Jagai, right swiftly turn ye then,
For the length and the breadth of that grisly plain is sown with Kamal's men."
The colonel's son has taken a horse, and a raw, rough dun was he,
With the mouth of a bell and the heart of hell, and the head of the gallows tree.
The colonel's son, he's up and away as fast as he can fly,
Till he was aware of his father's mare in the gut of the Tongue of Jagai
Till he was aware of his father's mare with Kamal upon her back,
And when he could spy the white of her eye he made the pistol crack.
He has fired once, he has fired twice, but the whistling ball went wide.
"Ye shoot like a soldier," Kamal said, "show, now, if ye can ride."
It is up and over the Tongue of Jagai, as blown dust-devils go,
The dun he fled like a stag of ten, but the mare like a barren doe.
The dun he leaned against the bit and slugged his head above,
But the red mare played with the snaffle bars as a lady plays with a glove.
They have ridden the low moon out of the sky, their hoofs drum up the dawn,
The dun he went like a wounded bull, but the mare like a new-roused fawn.
The dun he fell at a watercourse—in a woful heap fell he—
And Kamal has turned the red mare back and pulled the rider free.
He has knocked the pistol out of his hand—small room there was to strive—
"Twas only by favor of mine," quoth he, "ye rode so long alive;
There was not a rock for twenty miles, there was not a clump of trees,
But covered a man of my own men with his rifle cocked on his knee.
If I had raised my bridle hand, as I have held it low,
The little jackals that flee so fast were feasting all in a row;
If I had bowed my head on my breast, as I have held it high,
The kite that whistles above us now were gorged till she could not fly."
Lightly answered the colonel's son: "Do good to bird and beast,
But count who come for the broken meats before thou makest a feast.
If there should follow a thousand swords to carry my bones away,
Belike the price of jackal's meat were more than a thief could pay.
They will feed their horse on the standing crop, their men on the garnered grain,
The thatch of the byres will serve their fires when all the cattle are slain.
But if thou thinkest the price be fair, and thy brethren wait to sup,
The hound is kin to the jackal spawn—howl, dog, and call them up!
And if thou thinkest the price be high, in steer and gear and stack,
Give me my father's mare again, and I'll fight my own way back!"
Kamal has gripped him by the hand and set him upon his feet,
"No talk shall be of dogs," said he, "when wolf and gray wolf meet;
May I eat dirt if thou hast hurt of me in deed or breath.
What dam of lances brought thee forth to jest at the dawn with death?"
Lightly answered the colonel's son: "I hold by the blood of my clan;
Take up the mare for my father's gift—she will carry no better man!"
The red mare ran to the colonel's son and nuzzled against his breast.
"We be two strong men," said Kamal, then, "but she loveth the younger best,
So she shall go with a lifter's dower, my turquoise-studded rein,
My brodered saddle and saddle-cloth, and silver stirrups twain."
The colonel's son a pistol drew and held its muzzle-end,
"Ye have taken the one from a foe," said he; "will ye take the mate from a friend?"

"A gift for a gift," said Kamal, straight; "a limb for the risk of a limb.
Thy father has sent his son to me, I'll send my son to him!"
With that he whistled his only son that dropped from a mountain crest,
He trod the ling like a buck in spring, and he looked like a lance in rest.
"Now, here is thy master," Kamal said, "who leads a troop of the Guides.
And thou must ride at his left side as shield to shoulder rides,
Till death or I cut loose the tie at camp and board and bed.
Thy life is his; thy fate it is to guard him with thy head.
And thou must eat the White Queen's meat, and all her foes are thine;
And thou must harry thy father's hold for the peace of the border line,
And thou must make a trooper tough and hack thy way to power—
Belike they will raise thee to Rissaldar when I am hanged in Peshawur."

They have looked each other between the eyes, and there they found no fault;
They have taken the oath of the brother-in-blood on leavened bread and salt;
They have taken the oath of the brother-in-blood on fire and fresh-cut sod,
On the hilt and the haft of the Khyber-knife and the wondrous names of God.

The colonel's son he rides the mare, and Kamal's boy the dun,
And two have come back to Fort Monroe where there went forth but one.
And when they drew to the quarter guard, full twenty swords flew clear—
There was not a man but carried his feud with the blood of the mountaineer.
"Ha, done! ha, done!" said the colonel's son.
"Put up your steel at your sides;
Last night ye had struck at a border thief, to-night 'tis a man of the Guides!"
Oh, east is east, and west is west, and never the two shall meet
Till earth and sky stand presently at God's great judgment seat.
But there is neither east nor west, border or breed or birth,
When two strong men stand face to face, tho' they come from the ends of the earth.
—Rudyard Kipling.

MOUNTMELICK EMBROIDERY.

In early times it was very necessary to find work for idle fingers—work which should serve the purpose of putting in the time and also furnish a livelihood for the



TABLE-MATS IN MOUNTMELICK EMBROIDERY.

family. This embroidery was introduced into Mountmellick, Queens county, Ireland, about sixty-five years ago, by Jane Carter, herself an Irishwoman, and it has since become the staple industry of the women in that locality. An industrial association now provides work for more than fifty women. All sorts of beautiful articles of underwear, bed-linen and children's clothes are made of it, and its cheap price promotes the ready sale of it.

Firm, Irish linen is used and white knitting cotton of different numbers, both of which will withstand the ravishes of the laundry. Knot stitch, satin stitch, outline and rolled stitch are used wherever the pattern calls for it. In the toilet set all of them are used. The rolled stitch is made by wrapping the thread around the needle. The fringe is knitted of the coarse cotton and proves a very effective finish. No color but white is used upon them. Toilet sets and table furnishings can be made of it; also many beautiful garments for children's use.

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"BROWN'S BRONCHIAL TROCHES" are used with advantage to alleviate Coughs, Sore Throat, Hoarseness and Bronchial Affections. 25 cents a box.

HOME TOPICS.

TOMATO BISQUE.—Rub one can of tomatoes through a colander and heat it to the boiling point. Heat one quart of rich milk in a double boiler and thicken it with one tablespoonful of corn starch. When ready to serve, pour the tomatoes into the soup-tureen and add the hot milk, a little at a time, stirring it constantly. Season with a tablespoonful of butter, salt and pepper to taste, and serve immediately. This is a simple and most delicious soup.

SCHOOLS.—The first term of the school year is gone and the second just begun. I have no doubt that if I should ask all the

loving them just as devotedly, we grow reserved and chary of our expressions of love. Let us not do this. When our hearts are filled with love and joy and pride, as that of every true mother is for the tall young man who looks down on our head as he calls us mother, it will not hurt him nor us to let him see what is in our hearts. They need our love as much now as ever. When the seventeen-year-old daughter comes to us hungry for caresses that were showered upon her baby life, let us not turn her away, but open wide our motherly arms and let her see how dear and precious she is to us. It is a great mistake to repress and hide our



CROSS-STITCH FOR GINGHAMS.

readers of this paper who have children in school the question, "Are you interested in the school life of your children?" they would answer, almost indignantly, "Of course, I am." If I should question further, I wonder how many I would find who had visited the school, had become acquainted with the teacher, had examined the text-books and made themselves acquainted with the process by which the "averages" shown on their report cards have been attained, or how many have even a clear idea of the life in the school-room, the studies their children are pursuing, the mental and moral training they are receiving, and whether it is all adapted to fit them for their after life? There has been much said and written, in the last few years, upon the subject of educating children in harmony with their talents and the possibilities of their future. The kindergarten and manual training are results of this; but when fathers and mothers generally are aroused to the importance of the work, and not before, will the best results be accomplished.

Any teacher who is conscientiously trying to do his duty will gladly welcome the visits and acquaintance of the parents of his pupils. The more a teacher can know of the home life and surroundings and of the parents' hopes and ambitions for the child, the more intelligently can he work. Every mother and father should visit the school and teacher at least once in each term. Both teacher and pupils will be encouraged thereby. In following the regular course a child will often take no interest in some one study, or, perhaps conceive a positive dislike for it. This can usually be overcome if parents will interest themselves in it and co-operate with the teacher in striving to arouse the interest of the child.

Do not allow the children to find fault with their teacher at home, and no matter what reports come to you, never pass judgment until you have visited the school and made the acquaintance of the teacher in a kindly spirit. Do not expect too much in the way of patience from a teacher. Are you never nervous and impatient with your own two or three little ones? Think what it must be to have the care of thirty-five or forty restless children, and be ready to help the teacher in every way you can. Nine out of ten will appreciate your sympathy and be the better teacher for it.

GROWN-UP CHILDREN.—When our children are babies we kiss and pet them, are unstinted in our expressions of love, but too often as they grow older, although

deep affection for the dear ones around us. The time may come very soon when eyes that would have brightened and lips that would have responded to our words of love will be closed and silent and all our after life be filled with unavailing regret.
MAIDA McL.

SEASONABLE DESSERTS FOR THE FARMER'S HOUSEHOLD.

The great scarcity of fruit this year will render it trying on the country housewife, who has been in the habit of serving her family during the winter with fruit pies, rolls and puddings, as well as frequently having canned or dried fruit stewed.

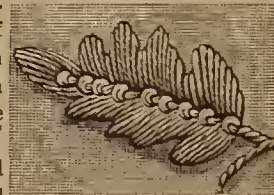
For such households a number of very acceptable and healthy desserts may be made with milk, butter and eggs, all of which will be found economical and easy to prepare. We give the following recipes, from which a selection may be made to furnish variety during the winter:

BATTER PUDDING.—One egg, one cup of sugar, two tablespoonfuls of butter, two and a half cups of flour and one teaspoonful of baking-powder. Mix well, pour in a mold and steam one hour. Serve with hard sauce.

MOLASSES PUDDING.—One cup of molasses, one of sweet milk, four of flour, two teaspoonfuls of baking-powder, half a cup of butter. Boil or steam two hours. Serve with lemon sauce.

CREAM PUDDING.—Mix half a cup of white sugar with one grated lemon. Beat six eggs to a froth, mix a pint of flour with a pint of milk. Stir in a pint of cream, mix with the white of an egg. Pour in a buttered dish, bake five minutes. Serve with rich sauce.

SNOW-BALL PUDDING.—Boil one quart of new milk and thicken with rice flour. Beat the yolks of four eggs with three tablespoonfuls of sugar. Mix all, pour in a pudding-dish and bake. Beat the whites of the eggs to a froth, add four tablespoonfuls of sugar and half a teacup of boiled



DETAILED PATTERN OF LEAVES.

rice; flavor with lemon. Drop in little balls over the pudding. Set in the oven to brown.

RICE PUDDING.—Boil a teacup of rice in a quart of milk, add a pound of sugar, half a pound of butter and six eggs. Flavor to taste and bake. Eat with butter sauce.

POTATO PIE.—Boil four large potatoes, rub through a sieve; to a pint of mashed potatoes add a quart of milk, a teacup of sugar and butter each, a teaspoonful of lemon extract and half a grated nutmeg. Pour in pie-pans lined with rich crust.

CHOCOLATE PIE.—Take four tablespoonfuls of chocolate, one pint of boiling

water; let it simmer for five minutes and add the yolks of two eggs, two tablespoonfuls of corn starch and six tablespoonfuls of sugar; mix and boil until thick. Line pie-pans with rich crust, bake and pour in the chocolate. Beat the whites of the eggs with powdered sugar, spread on top of the pie and set in the oven to brown. Serve cold.

SUGAR PIE.—Two cups of brown sugar, half a cup of butter, half a cup of cream, three eggs. Flavor with extract of lemon. Bake in crust without a top.

CREAM PIE.—Beat the whites of two eggs, a tablespoonful of flour and a teacup of sugar together; add a pint of cream. Bake in deep pie-pans. Grate nutmeg over the top.

CHEESE PIE.—Beat a cup of sugar, three eggs and a cup of butter together, flavor with lemon. Bake in a rich crust and spread over with the beaten whites of egg sweetened.

FARMER'S CREAM.—Dissolve half a box of gelatine in half a pint of milk; beat six eggs very light, mix the yolks with boiling milk, add the gelatine, sweeten and flavor. Pour the whites of the eggs, well beaten, over the top. Pour in jelly-molds.

CHARLOTTE RUSSE.—Cut slices of sponge cake and fit in the bottom of a mold, fill with one pint of whipped cream, sweetened and flavored, mixed with two eggs and half a pound of sugar. Set on ice.

ELIZA R. PARKER.

FASHIONS.

After a good stay in two such capitals of millinery as Paris and London, even so unfashionable a traveler as I am may be considered a modest authority on gowns, wraps, flowers and flummery generally, and I find my note-book (made up on the spot) to be full of general directions and hints that ought to be of value. In the matter of colors, blue, heliotrope, brown and green in many shades are in the first favor. Heliotrope, or rather purple in the prune and mauve shades, is perhaps in highest fashion. For the street, rough woolen goods and Scotch tweeds are almost entirely worn.

Plaids are mostly worn for street dresses and long cloaks, and these will be very rough, with here and there a splash of mohair or silk curl in loose knots upon the surface. The plaid goods are made on an exact bias, the bodices matching at every seam and buttoning either on the side or invisibly under the arm and on the shoulder. With plaid dresses are worn plaid cloth shoes, with kid or patent leather vamps or tips. Plaid cloaks or mantles reach to the edge of the dress, and are gathered full upon deep, V-shaped yokes of velvet, which have a finishing frill of pinked velvet and a high Medici collar. A handsome wrap of this sort was of plaid in prune shades with a yoke of prune velvet; a more stylish one was of gray plaids and black velvet yoke.

Skirts are plain in front with small, interlaced plaits in the back and no tie-backs, hoops or bustles at all. Upon these plain skirts small hip draperies or paniers are placed. Evening dresses and carriage dresses have almost in every case paniers. A beautiful white silk has paniers, and under the arm gores of black lace. A French gown made for a New Orleans lady was of exquisite hand-made silk

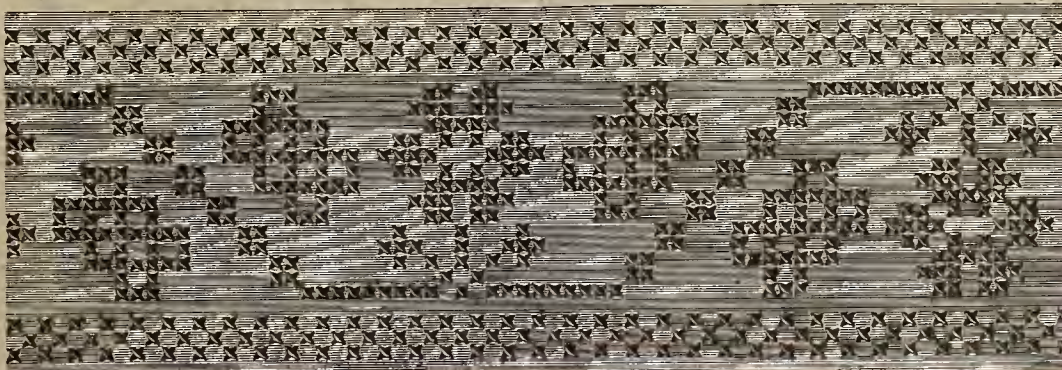
The most fashionable sleeve is called the "Sicilienne." It is full and large to the elbow and skin tight to the wrist. In combination suits the under half of the sleeve will be of the other color. Most of the stores sell velvet, silk and braided sleeves ready made, and many ladies add variety to their costumes by varying the sleeves in their gowns and jackets. As somebody says of Mrs. Grant's recent contribution to reminiscential literature, "This is, to say the least, unique." Henri IV. styles are in high favor.

There are wonderfully pretty capes with sleeves to them, and the waists of dresses have jabots and wrist ruffles and are finished at the edge with double satin, lined tabs or loops of ribbon or silk to match the gown. With such gowns a woman of taste can make herself look like some old picture and charm by the quaint fashion of her robes. A more conventional, but not less graceful, cut for bodices is to gather the full front into a V-shaped belt just below the waist line.

Crepe de chine is one of the graceful fabrics for evening dresses, and crepe de chine sashes, beginning up under the arm, are tied in long loops over the left hip.

One of the prettiest combination gowns we saw in Paris was of soft mauve cloth, with a Medici collar and Sicilienne sleeves of silver-woven cloth; with this were worn gray cloth shoes and a mauve hat covered with silver-gray plumes. Medici collars are sold separately and worn with almost every costume.

Pretty, silk waists in black, scarlet and electric-blue silk, with zouave-shaped trimmings in fine gold braid or black

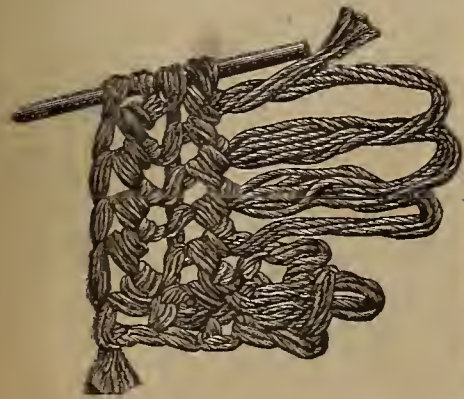


CROSS-STITCH FOR GINGHAMS.

passementerie, with tucked sleeves and loose, bust draperies, forming a half vest or pouch, are worn with any colored skirts. Velvet wraps for calling and reception wear are covered with passementerie. They are V-shaped, short and gathered full with a sleeve effect over the arms.

Street wraps have wide, braided sleeves, close backs and long fronts that reach far below the knees. Other stylish jackets are like Newmarkets, cut off short and just covering the hips. Hats are very large, bonnets are small and cap-like, resembling the coif Margaret Mather wore as Juliet. A new evening bonnet is of three bands of gray velvet dotted with jet acorns. Feathers and ribbons and lace feathers are used for trimmings, but neither flowers nor birds.

The "owl" is the name of a fashionable collarette that comes in cocks' feathers, ostrich tips, lace and silk, and there are pretty ones of roses for theatre wear. These are tied up in the throat with inch-wide ribbons. Lisse ruffles, four inches



BORDER AND FRINGE FOR TABLE-MATS.

Flanders lace. The train was about six inches only; with this was a Henri IV. jacket of black velvet, rather low in the high neck, with the square sides and full jabots of lace on the front, and heavy frills of lace on the tight, long velvet sleeves, the frills falling almost to the finger tips. From the shoulders hung square, loose sleeves of black lace. This gown was superbly stylish and elegant.



which is really only silk poplin. It is extremely fashionable for wedding dresses. Apropos of dress goods, most of the foreign shops sell silk and satine and linen dress foundations ready made, upon which the home dressmaker has only to drape her material. Ruchings in pinked silk or lace are sold by the yard to trim the edges of ball-dress skirts; and quite the most fashionable trimming for street dresses is

Persian lamb, put on broad or narrow, as vests and as collars.—Catherine Cole, in *New Orleans Picayune*.

FARMER'S BARN-YARDS.

Some day, when you have nothing else to do, take a ride through the country and count all the neatly-kept barn-yards you see. Even if you have other duties, go, if for no other reason than out of curiosity. In a ride of twenty miles you will not see ten half neatly-kept barn-yards, and not more than two—more likely not one—as it should be kept. You will see a wagon here, another there, over there a sled and in another place a hay-rack, flat on the ground, all ranged about the middle of the lot; and besides all these things you will see plows, corn-planter, harrows, small hay-stacks, piles of boards, rails, posts and many other things I cannot now enumerate, thrown around in a haphazard way that ought to put any farmer to shame. Not a blade of grass to be seen, when there should be a well-sodded yard.

In thinking of the many, many farmers I have known, I can remember but one who has a well-kept barn-yard. And, as the yard indicates, he is a very methodical farmer. "A place for everything and everything in its place," is his motto, and the entire farm shows that his motto has become a reality, not a mere theory.

When he drives into the lot his wagon has a place of its own; each piece of machinery has its own place. Nothing is left in the center of the lot for a horse to run over and perhaps cripple itself. This barn-yard furnishes pasture for two work horses during the summer nights, and for

four or five calves through the entire summer; yet, it does not contain over two acres. But the horses are never allowed to run in it when the ground is soft. Of course, it never becomes cut up and rough. The farmer has hauled plenty of gravel about the barn, and little or no mud is found there.

As most barn-lots are along the road in line with the house-yard, one would suppose as much care would be taken to keep them in order as is used on other premises. There is just where you are mistaken, as a ride will convince you. The house-yard may be perfectly neat and the adjoining barn-lot may be a perfect slough of filth and disorder.

Why do not these men realize that their lots are but blots on an otherwise lovely picture? Why not use a little forethought when driving in with machinery and vehicles? It takes no longer to drive a wagon to the same place each time, than it does to unhitch wherever the horses may happen to stop.

"But," says one, "I haven't room."

You think you have not room simply because your lot is in such a confused jumble that you do not know yourself how much room you have until you "size up," as the housekeepers say. Just try it once; if not for your own satisfaction, do so for the pleasure of the people who pass your place. At first they may make remarks and be inclined to wonder what can have taken possession of you, it is so unlike you to have order in your barn-yard. But never do you mind their talk; when this systematic plan has become a habit with you, others may be led, seeing your "light," to "go and do likewise."

ELZA RENAN.

HAVE YOU CATARRH?

There is one remedy you can try without danger of Humbug. Send to H. G. Colman, Chemist, Kalamazoo, Mich., for trial package of his Catarrh Cure. His only mode of advertising is by giving it away. Postage 4 cents. Judge for yourself. Mention this paper.

Camel's hair in alternating stripes of long and short hair, or spotted with lozenges of longer hair, are in vogue.

COLD WEATHER HINTS.

HEAD.—A black silk night-cap will be found to be of great service on a very cold night. Headache can be warded off by keeping the head warm. As women grow into old age they should give up the tiny bonnets of their younger days and adopt something that will protect the back of the head and behind the ears. Wearing the hair taken up from the back of the head exposes the head very much. Even a slight illusion veil is a great protection against the cold and wind.



DETAILED PATTERN IN MOUNTMELICK EMBROIDERY.

LIPS.—Many are troubled with chapped lips and fever blisters; for this we have a simple but unfailing remedy which we always keep on hand. Ten drops of carbolic acid in a tablespoonful of glycerine. When the first stinging sensation of a fever blister is felt, apply it immediately and it will kill it.

A lip salve can be made from the following recipe. Mix with two tablespoonfuls of sweet oil a lump of sugar dissolved in one and one half tablespoonfuls of rose water, add a piece of spermaceti half the size of a walnut, simmer in a vessel set in hot water and turn into little boxes, which can be had at any druggists.

These little toilet accessories are only among necessities. Little sores allowed to go on are often very great annoyances, and often develop into something more serious.

HANDS.—It is not at all necessary that any work we do need make our hands so bad, unless we neglect them. Gloves should be worn at all outdoor work, even if a rude, home-made pair. Taking the hands from washing and going out into the wind to hang up clothes will be sure to chap them.

Using all sorts of strong soaps, bought because they are cheap, ruins the skin. If soda or borax were used more in dish washing, no soap would be needed.

A good, cheap remedy to keep on hand is, one half ounce each of glycerine and alcohol with four ounces of rose water added; bottle and shake well before using.

POWDER FOR THE FACE.—In the first place, do not use soap on the face. Rub it with sweet oil before going to bed and in the morning wash it off with hot water into which a few drops of ammonia are placed. Then dust it with corn starch, a perfectly harmless face powder, using a soft chamois or flannel to put it on with. A shiny face never has a very refined look.

BETTINA HOLLIS.

HOW TO MAKE A HANDY CUP.

Take a clean, quart can, unsolder the top, make a hole about one third the way from the top, large enough to admit an inch and a half screw, saw off one end of a common-sized spool, hollow out the little end for the head of the screw, fit the screw through the spool end and through the hole in the can; now take the end of an old broom-handle, say six inches long, bore a small hole in one end for the screw, hold the screw with an old knife blade and turn the handle until tight.

J. H. McC.

FIG OATMEAL PUDDING.—Soak figs—say over night—in very little water, then slice and place alternate layers with hot oatmeal dough. Bake or steam an hour.

NOTE.—Other varieties of either raw or preserved fruit may be used. To always retain a relish for so wholesome, nutritious and easily prepared food as the above, use only fresh meal. Do not use it too often. However palatable, avoid a surfelt.—Hammon (N. J.) Mirror.

TOKOLOGY

A complete Ladies' Guide in health and disease. Cannot be bought of dealers. Sent prepaid \$2.75. Women write that "Tokology is worth its weight in gold." "Should my house take fire it would be the first book saved." "No book sells like TOKOLOGY." SAMPLE PAGES FREE. Best Terms to Agents. ALICE E. STOCKHAM & CO., 161 La Salle St., CHICAGO, ILL.

Our Sunday Afternoon.

A HAMLET OF THE DEAD.

MARK, majestic wood is on one side,
While close-cropped, meadow fields
stretch far away;
The rank grass springs, the graves to hide,
And gloomy cedars bar the light of day.
No sculptured marble lifts its column toward
the skies,
To mark the peaceful sleepers earthy bed;
No wordy epitaph parades its group of lies,
Within this quiet hamlet of the dead.

A thousand mounds, like emerald billows
frozen in a gale,
Are green-topped tents wherein a people doth
reside;
And each inhabitant, so quiet and so pale,
Dwells with his peaceful neighbor, side by
side.
No giddy turmoil e'er disturbs their holy rest;
No men of trade with busy, noisy tread,
And love of gold within each scheming breast,
Invade this modest hamlet of the dead.
Along the leaf-strewn walks, the wild flower
smiles,
The thistle nods across the ruined fence;
And flitting through the green and shady
aisles,
The lone bird chirps within the forest dense.
But neither sight nor sound will e'er awaken
these,
Who rest unconscious of the wintry wind
o'erhead,
Or of the summer morning's balmy breeze—
These dwellers in the hamlet of the dead.

Full many years have passed since first a few,
Like hardy pioneers upon a foreign shore,
Did rear their humble domiciles to view.
In time there followed many, many more;
And soon this quiet, verdant village full will
be;
Room only for the stealthy night winds
tread,
As passing swiftly on from tree to tree,
It sings a requiem to the silent dead.

—S. Q. Lapius.

RELIGION IN THE SCHOOLS.

DELEGATES from the
twenty-three ecclesi-
astical bodies, representing nine
denominations, recently met in
New York City to discuss the
question of introducing
religious and moral instruction into the
public schools. The movement originated
with the Presbyterian Synod, which, five
years ago, appointed a committee to con-
sider the matter and report. This com-
mittee was continued from year to year,
and the movement at length culminated
in an invitation to all other denominations
besides the Presbyterian to send delegates
to a conference. Of the fourteen denom-
inations to which the invitation was ex-
tended, the Disciples of Christ, Congrega-
tionalists, Episcopalians, Independents,
Lutherans, Methodists, Presbyterians, Re-
formed Dutch, Reformed Episcopalians,
and Reformed Presbyterians replied that
they would send delegates; the Unitari-
ans, United Presbyterians and Univer-
salists have made no reply, and the Bap-
tists, through their New York State Pastors
Conference, held at Lockport on October 28
and 29, unanimously decided by a rising
vote *not to take any part in the movement.*

Two Presbyterian ministers appeared
before the body as representatives of the
Synod to invite the Baptists to meet with
the committee on Religion and Public
Education. The Baptists referred the mat-
ter to a committee.

The committee reported a series of res-
olutions, thanking the Synod for the invi-
tation, and setting forth these reasons for
declining to accept it:

"We believe that it is a manifest injus-
tice to tax those who do not believe in re-
ligion for the maintenance of schools in
which are taught religious principles
which they do not wish their children to
learn; and further, that the inauguration
of such a system of religious teaching in
our public schools, forms a valid argument
for the division of the school funds with
those who might not relish such teaching,
thus resulting eventually in state support
of schools in which the creed of Agnos-
ticism, Buddhism, Confucianism, Judaism
or Romanism might be taught.

"We believe that the state ought not to
teach religion, because this would mean,
in our age, religious instruction by un-
regenerate persons who do not know what
true religion is, and whose instruction
would, in a large degree, be marked by
hypocrisy, formalism, irreverence and
error. We do not wish such persons to
instruct our children religiously. The
state should teach only that on which all
are agreed, and should not invade matters

of conscience or religious opinion. If the
state may teach religion in the schools,
she may teach religion in churches of
her own establishment. It is only on
this broad ground that we can oppose
those who would subtly instill Romanism
or the creed of Agnosticism into our
public instruction.

"We thus reaffirm the grand old Baptist
doctrines of soul liberty for all men, as
well as ourselves, and of the non-interfer-
ence of the state with the church in her
peculiar function of teaching religion."

"These resolutions," said the Rev. Dr.
R. S. MacArthur last evening, "express
the opinion, as I believe, of nearly every
member of the Baptist denomination. The
Baptists have always been consistent
in their belief that there should be an
entire separation between church and
state, and so long as they remain so they
can oppose, consistently, the demand of
the Catholics for a share of the public
moneys. Many Baptists even go so far as
to oppose the law exempting church
property from taxation. Yet I have long
been of the opinion that a text book might
be prepared embodying instruction on
morality, and so worded that it would be
acceptable to Protestant and Catholic, to
Jew and Gentile. If, however, the in-
struction contained in such a book were
to be based upon a belief in God, it would
meet the opposition of the infidel. I be-
lieve that it is unfair and unjust to tax a
man for the promulgation of doctrines in
which he does not believe, and therefore
would make the teaching of morality in
the public schools a separate matter en-
tirely from religion. The Baptists from
the days of Roger Williams, have held
tenaciously to the doctrine of religious
liberty, and they are loath to do anything
which might be construed as inconsis-
tent with their past record.

WHEN JESUS COMES.

Some people seem surprised at the
eagerness which Second Adventists dis-
play for the return of the Lord Jesus to
this earth again.

But why should they not be eager for
his return, when that return means re-
union for the parted, immortality for the
mortal, health for the sick, life for the
dead, land for the landless, habitations for
the homeless, plenty for the destitute,
bread for hungry, water for the thirsty,
sight for the blind, hearing for the deaf,
speech for the dumb, strength for the
weak, youth for the aged, liberty for the
captives, riches for the poor, "beauty for
ashes," "a garment of praise for the spirit
of heaviness," "the oil of joy or morn-
ing," peace for the troubled, rest for the
weary, gladness for the sorrowing, songs
for the sighing, society for the friendless,
perfect bodies for the crippled, mansions
for huts, crowns for crosses, light for
darkness, wisdom for ignorance, strength
for weakness, harmony for discord, with
an eternal inheritance in the kingdom of
God for all his ransomed people.

\$3000 A YEAR! I undertake to briefly
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sex, who can read and write, and who,
after instruction, will work industriously,
how to earn Three Thousand Dollars a
Year in their own localities, wherever they live. I will also furnish
the situation or employment, at which you can earn that amount.
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ness; it is the cleanest of
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has no need of a dirt-pocket.

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a child, can take care of it.
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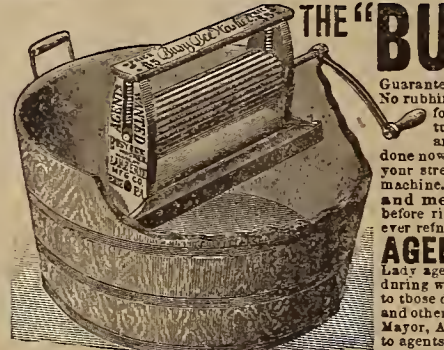
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A LAMP BROODER FOR CHICKS.

WE give an excellent brooder by Mr. D. M. Palmer, New York, in this issue, as used by him the past season. It is 4 feet long, 22 inches wide and 18 inches high on one side and 24 inches high on the other side. The box for the lamp is 12x16 inches inside. The brooder box has an open bottom, but the cover fits tight, the top having two or three inches air space over the tank, should the top be level. The water-tank (Fig. 2) is made of galvanized iron, one inch deep and 12x5 1/4 inches. The stand-pipe is 8 inches long, made large enough to insert the neck of a quart bottle in the top.

Any house lamp can be used, the top of the chimney being half an inch from the underside of the tank. The tank is covered with cloth or bagging, sewed on close and tight. The mother is a frame, made of pine, covered with paper or tarred felt, with woolen, cut in strips, tacked on the edge, and when in position

TURKEYS AND PROFIT.

With the good prices now being obtained for turkeys, they pay a large profit, despite the difficulty of raising them when they are young, for a flock that has had a free range will pick up nearly all the food that was eaten. It is just as easy to raise a large turkey as to keep a small one, and you should aim to improve your flock next season by procuring a Bronze gobbler, which adds vigor to common flocks, as it is a complete change of blood. We do not advise the use of pure breeds, but to cross, as the pure breeds are sometimes themselves closely inbred. Unless the gobbler is procured from some flock of pure-bred fowls, there will be a liability of a waste of time, as a half-blood male is utterly useless for purposes of improvement. Keep the largest and best hens for breeding, and aim to have a fine flock. The profit will then be larger than when only the ordinary, common kinds are used, as a gain of only two pounds on each turkey is quite a large item in the profits.

AN IMPORTANT POINT.

One of the most important aids to securing a large number of eggs in the winter season, though not so frequently mentioned as the warmth and the food, is scratching. When the hens do not scratch

casess should be shipped in one lot. If there are any inferior fowls to be shipped it is better to sell them alone, and at a sacrifice, than to allow them to influence the prices for the choicer carcasses.

LICE IN WINTER.

The large, gray louse preys on the skin of the heads and necks, and the long louse works on the feathers. A few drops of sweet oil, or lard oil, on the skin of the heads and necks is the remedy used. Provide a dust bath for the hens in winter, as they will then keep the feathers clean by frequent dusting.

THE GRAINS TO USE.

As is well known, fowls will eat all kinds of grain. Do not confine them to one kind. Corn, wheat, oats, barley, rye and sunflower seed, given at different times, make better food than to feed them on any one kind alone. The hens will always appreciate a change of grain, and will thrive better and be more prolific, when given a variety.

THE FEED AND WARMTH.

The warmer the poultry-house the less food required. It does not pay to feed hens simply to keep them warm. It is cheaper to warm them by keeping the cold away. Warmth is a luxury; adds nothing to the fowl that tends to a profit, and is given off as fast as it is created. Food should be given with a view to securing some return for it. It is not economical to stop up a crack in the wall of a poultry-house by mitigating its effects through an extra allowance of food, but the crack should be closed in some other way, and the food lessened. Food is money expended and should bring back something for the outlay.

THE DROPPINGS IN WINTER.

What to do with the droppings and how shall they be preserved, is a matter for consideration. One of the easiest and best methods of disposing of them is to scatter them on the garden plot, and there let them remain on the ground during the winter. If the plot has been spaded or plowed, so much the better. As there is always a loss of ammonia from the droppings when they are stored away, the plan of scattering them on the garden whenever the poultry-house is cleaned is as good as any other method, and perhaps better.

GROUND FOOD.

There is but little advantage in feeding ground food, as the fowls need no aid in the matter of pulverizing their food, the gizzard doing that service well; but there are some foods that can easily and cheaply be procured in the ground condition, such as bran and middlings, which make excellent food for all kinds of poultry. Bran is very beneficial, as it contains more mineral matter than some ground foods, and is, perhaps, as cheap as anything that can be given. Fowls, however, prefer whole grains.

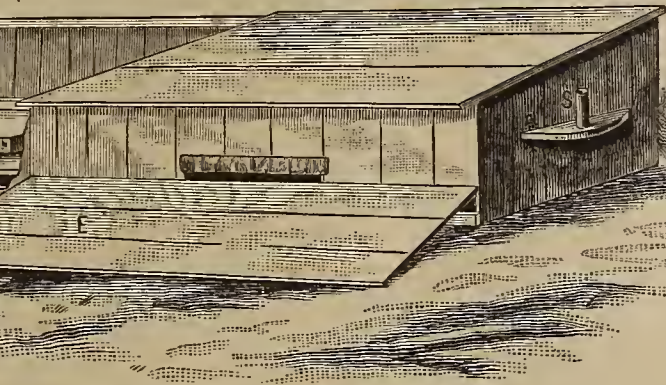
INQUIRIES ANSWERED.

Food for Pekin Ducks.—S. A. W., Plymouth, Mass., writes: "Will you please tell me the best food for Pekin ducks for laying, and for the young ones? Are they very tender or hard to raise?"

REPLY:—Cooked turnips, to which corn meal and bran may be added, are excellent. They require some animal food, such as ground meat, three times a week, and chopped clover (very fine, and scalded) is excellent. Feed old and young on anything they will eat. The Pekin is hardy and easily raised.

Result of Dry Food.—J. D. R., Medora, Ill., writes: "I have a very fine Plymouth Rock rooster which is affected nearly like a person with piles. He first showed signs of trouble in passing stools about a month ago, and passed blood, and still does so, and the rectum seems to be protruded an inch. He has had plenty of range and good water. Some others seem to be similar, but not so bad. What must I do for him?"

REPLY:—The difficulty is due to costiveness. The use of green food will prevent the trouble. Give each fowl a tablespoonful of linseed meal three times a week (gradually reducing it to a teaspoonful) in the soft food.



A LAMP BROODER FOR CHICKS.

lies on top of the tank. The mother is a little smaller than the inside of the brooder—say five or six inches. Use a sliding platform for the chicks and set it, at first, three inches lower than the underside of the tank, and lower the platform half an inch every ten days.

The illustration shows a double brooder, with tight partitions in the middle, and with openings for the chicks on opposite sides. The chicks in each brooder have separate runs. To set the brooder, have the end over the lamp (three quarters of an inch the lowest from the top of the lamp, but half an inch is better), and the water will freely circulate. Fill the tank to the top of the stand-pipe, then fill a bottle with water and place the neck of the bottle in the opening of the stand-pipe (which gives pressure to the water), and the circulation will be complete. When chicks are very young, keep the inclined plane raised up.

This brooder is an improvement over many others, as it heats with but little oil, and one need not go to the expense of a boiler. Chicks raised in it had no leg weakness and grew splendidly.

In Fig. 1, AAA show the tank, B the lamp, D the movable platform, E the inclined plane (or run), and S the stand-pipe (which is also used for filling the tank).

In Fig. 2, the tank is shown, A being the end that goes over the lamp and S shows the stand-pipe.

The sketch shows one half of the cover removed, and also the side left open to have a view of the inside.

FROZEN FOOD.

Do not feed an ounce more than the fowls will eat. Anything left over will be wasted. The hens cannot eat frozen food, and they trample it into the droppings. As soon as the meal is finished, the troughs should be emptied, if soft food is given. It is better to use soft food but once a day, thereby saving labor and waste.

SWOLLEN EYES AND HEADS.

This difficulty will now be frequent, and is usually caused by draughts or currents of air from some source. The top ventilator is one of the causes, and high winds will also induce it. Anoint with one or two drops of a mixture of spirits turpentine, one part, and sweet oil, three parts, once a day.

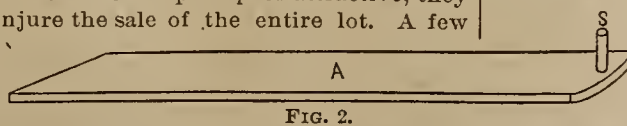


FIG. 2.

choice carcasses will not assist in selling a lot of poor fowls, but the poor stock reduces the value of the whole. The commission merchants understand this fact, and when they buy they always assort and grade it.

Customers differ in their desires, and to please them some pains must be taken. There are customers who seek the largest turkeys to be found in market, but the majority prefer turkeys of medium size. When chickens are sold, many customers buy those with yellow skin and yellow legs. Such carcasses should be separated from the others. All of the very fat car-



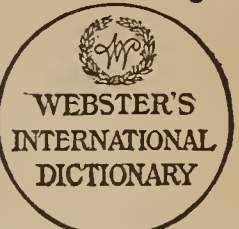
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Queries.

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Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Language Without a Teacher.—M. E. M., Purcell, Ind. Ter. Write to Estes & Lauriat, Boston, Mass., for circulars of information about the Meisterschaft System.

Pure-Bred Sheep.—H. F. K., Roaring Spring, Pa. You will find pure-bred sheep of all breeds advertised for sale in the *Breeder's Gazette* and *American Sheep Breeder*, both published in Chicago, Ill.

Hen Manure.—C. L. P., Saccarappa, Me., asks how to compost hen manure to make a good top-dressing for corn and beans. Save it in boxes or barrels mixed with plenty of land plaster to absorb the ammonia. Before applying, pulverize it and sift it through a coal-sieve. It is sometimes saved by mixing it with dry muck, in the proportion of one to ten.

Catalpa Seed.—J. C., Pleasant, Ind. You can get catalpa seed and the seed of other forest trees from nurserymen and seedsmen. We think it would be better for you to purchase small seedling trees and set them out in the spring than to grow the trees from the seed. Some nurseries make a specialty of raising forest trees. R. Douglas & Son, Waukegan, Ill., and George Pinney, of Evergreen, Wis., sell seedling forest trees of all kinds.

Mixing Ashes with Stable Manure.—M. W. W., Martinez, Cal., writes: "After using stable manure, does it prevent the effects of it to use wood ashes freely on the same?"

REPLY:—An application of wood ashes on ground heavily manured will hasten the action of the manure. The ashes will set the ammonia free from the manure, but the soil will absorb it. In composting manure, do not use ashes unless you also provide absorbents to hold the ammonia set free.

Raising Flax.—A. S., Harrisonville, Mo., writes: "A great amount of flax was sown here last season. There is an opinion prevailing among the farmers here that laud which has produced a crop of flax will not produce another good one within five years. Is it so?"

REPLY:—No, not exactly; but flax is a very exhaustive crop and should not be grown continuously on the same ground. It is not a very profitable crop except for rich land, and where you can dispose of both seed and straw.

To Keep Rabbits from Young Fruit Trees.—E. R. M., Wilbur, Wash., writes: "I have a nursery that is troubled with rabbits. I have been wrapping the trees with paper, but it is so much work that I would like to find out an easier way. Would it do to nail pieces of narrow boards together and set them over the trees?"

REPLY:—A nursery should be protected by a rabbit-proof fence. The woven slat and wire fence is a very good one for the purpose. It is in use in southern California for protecting young vineyards. Surround your nursery with such a fence, leaving a portion at one corner open. Then get up a rabbit drive and send them all out. Close up your fence, and fix your gates with weights so that they will swing shut. As long as you will keep the gates closed when not in use and the fence in good repair you will not be troubled. Rub the young trees with sulphur and lard, and rabbits will not touch them.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

Ophthalmia.—I. I. M., Prairie Station, Miss. I refer you to inquiry headed, "Going Blind," in paper of December 15th. No cure is known.

Worms.—R. A. H., Marlenfeld, Tex., writes: "Can you tell me how I can cure worms in horses? I have two horses that have worms in the rectum about two inches long."

ANSWER:—Make injections of raw linseed oil into the rectum.

Castration of Three-year-old Ram.—T. B. R., Honeton Hill, —. The operation, if properly performed, is not particularly dangerous, but whether you will gain very much by it, is another question. It may be performed at any time.

Probably an Epithelioma.—J. A. P., Superior, Neb. The tumor you complain of, very likely, is an epithelioma. To remove it, a surgical operation will be necessary, which, however, requires a good surgeon to perform it. The member, probably, will have to be amputated.

Paralysis of Hindquarters.—T. Q., Glade, Pa. An inquiry similar to yours has been answered in issue of December 15th. In cases in which paralysis is only apparent, and due to weakness of the bones, feeding bran and other substances rich in lime salts may have a good effect.

Lice on Cattle.—A. B. Broadalbin, N. Y. Since it is winter and the weather, very likely, too cold to apply a wash, I advise you to use Persian insect powder and apply it by dusting it in between the hair by means of an insect-powder syringe, which can be obtained in almost any drug store.

Probably Vertigo.—P. P., West View, Ohio. The disease complained of seems to be vertigo; still, the attacks may be of an epileptic character. Your description is not sufficiently to the point to decide. Both diseases are incurable unless the cause can be ascertained and be removed, which is but very seldom the case.

Founder.—C. F. C., Milldale, Conn. Founder, or laminitis, can be successfully treated (cured) only when of less than three days existence. In chronic cases some relief may be given by judicious shoeing—putting on bar-shoes. See answers to similar inquiries in recent numbers of this paper.

Luxation of the Patella.—W. M. M., Fox Lake, Wis. Your horse, undoubtedly, suffers from a partial luxation of the patella (kneecap), which slips out and in if an awkward movement is made. For information as to treatment I have to refer you to the answers given to similar inquiries in recent numbers of this paper.

Shipping Brood Mares.—J. M. C., Lexington, Mich., writes: "Would mares in foal be likely to be injured by being shipped on a freight train five hundred miles?"

ANSWER:—It altogether depends upon circumstances—upon the precautions taken, the treatment the animals receive and time until foaling. If the latter is near at hand, I would regard a transportation of five hundred miles by rail as risky.

Enemas—Physiology.—P. W., Mount Brydges, Ont., Canada, writes: "Are enemas ever practiced on horses?—Please give the physiology of the digestive apparatus of the horse."

ANSWER:—Enemas, where indicated, are given to horses as well as to other animals. As to your other request, I have neither space nor time to comply with it by writing a lengthy treatise on physiology. Buy a book on physiology of domestic animals and study it.

Cribbing.—W. P. C., Waverly, Ohio. Your mare, it seems, has developed into a cribber. Cribbing and wind-sucking constitute a bad habit, which, once acquired, is hardly ever abandoned. There are several devices by which it may be temporarily prevented; for instance, lining the boards of the feed-box or manger with sheepskin with the wool on, putting a spring bottom in the manger, buckling a leather strap around the neck of the animal, etc. But all these, as well as other devices, have only a temporary effect. Once a cribber always a cribber.

Cattle Disease.—G. S., Prince George C. H., Va., writes: "There is a disease among the cattle in this neighborhood. I have one that is nearly blind and so weak that it staggers and sometimes falls."

ANSWER:—You probably exaggerated the symptoms given—the weakness, staggering, falling down and quivering (of muscles)—or omitted and overlooked other symptoms of importance. If not, I do not know of any such disease to which the symptoms as given would apply. If you exaggerated, it may be ophthalmia, concerning which I refer you to a recent number of this paper.

Scab in Sheep.—N. P., Clark's Mills, Pa. A thorough dipping in a good tobacco decoction, to be repeated on the sixth day, and at the same time a thorough cleansing of everything on which the scab mites may have been deposited, or, still better, a removal of the dipped sheep to uninfected premises, will effect a cure. In cold weather, when dipping, very likely, would be too severe on the sheep, it is advisable to resort to a palliative treatment until warmer weather sets in, and to apply, now and then, or as often as necessary, some strong or concentrated tobacco decoction to the plainly diseased parts of the body, and to wait with the dipping until the weather is warmer.

Lameness.—J. R. T., Palmyra, Ohio, writes: "I have a colt six months old, that has been lame about two weeks. Its fore feet are both enlarged between the ankle and hoof, and feel hard like ringhones. The ankles commenced to swell up. They appear stiff. It is troubled with worms, but in other ways it appears to be perfectly healthy."

ANSWER:—The disease, it seems, is either rhachitis or ringbone. If the former, feed food rich in phosphate of lime; for instance, bran, etc., and apply iodine preparations—tincture of iodine, for instance—to the enlarged points. If the tincture is chosen, it may be rubbed in once a day. If it is ringbone, I regard the colt worthless—not worth raising. In regard to worms, I refer you to the answer given to inquiry headed "Worms," in present issue.

Retained Afterbirth—Young Bulls.—Carlisle, Ark. If cows do not clean within three days after parturition, as it happens quite often in cases of premature birth, the afterbirth may either be removed by hand (an operation which can be performed without injury to the cow only by an expert), or else its removal may be promoted by a few doses of ergot, in the shape of a warm infusion prepared from an ounce of freshly-powdered scab cornutum. At the same time, injections of warm camomile tea and afterwards antiseptic injections, should be made into the uterus. The latter may consist of a one-percent solution of carbolic acid. This latter treatment, however, is not always successful, and to be preferred only when, for one reason or another, the removal by hand is impracticable. Concerning the age when young bulls should be first used, the answer would depend upon the breed, constitution and physical development of the young animal.

Navicular Disease—Colic.—C. F. P., Chapman, Kan. Your question is difficult to answer. So far, none of the various treatments proposed has met with much success. Judicious shoeing and good care of the feet will give a little relief, but a little only, and it will depend entirely upon circumstances and upon the peculiarities of the case what treatment, if any, is to be applied. Some claim to have been successful with counter-irritants, some with Sewell's seaton through the frog, and others advocate a cutting of the nerves leading to the diseased parts. The latter, of course, relieves the pain, but the morbid process is not removed; the foot will be like a wooden one, and is apt to undergo serious degeneration, and may even mortify. If you want to do something, I advise you to consult a veterinarian, who can examine the case and treat it accordingly. It is difficult to prevent colic in an animal that is subject to it and has had several attacks. Strict regularity in feeding, giving only such food as is wholesome and easy of digestion, and clean well water to drink, and then seeing to it that the work the animal has to perform is as regular and uniform as possible, is the best that can be done.

Bad-Flavored Milk.—L. S., Independence, Iowa, writes: "What is the reason that the milk from our cow has a strong taste after it stands twenty-four hours? The cow had the last calf in April, 1889, and will not come in again until the last week in March next; she gives about one quart at a milking, morning and evening, is eight years old and in fine condition. She has all she wants to eat of best clover and timothy hay three times a day, and eats heartily. She also gets a warm mess consisting of about two quarts of oats and corn, ground, one pint of middlings, one half pint of oil meal and a pinch of salt twice a day; each mess scalded about twelve hours before feeding. She drinks two pails of clear well water per day, stands in a comfortable stable, well bedded, is let out in the yard for exercise whenever the weather is pleasant. She was dry about eight weeks, last time, and for awhile before calving, her milk had a similar taste. The milk is kept in a cool, clean

place, free from any odor. Once or twice a week she gets a mess of either cabbage leaves, beets or potato peelings."

ANSWER:—Omit feeding oil cake, cabbage leaves, beets and potato peelings, perhaps also the oats; feed less milk-producing food, and endeavor to get your cow dry. The milk secretion is too much forced, and the milk is getting too "old."

Paralysis in the Hindquarters.—B. F. C., Williamsburg, Kan., writes: "My mare was running in good pasture and was looking fine until about two months ago, when I discovered that something was wrong with her. When she put either hind foot to the ground while walking there would be a quivering or a trembling along the leg from the thigh down the muscle of the leg on the outside. She seemed in some pain, would eat grass awhile and then lay down. I took her up, gave her some medicine and in a day or so she seemed better; the quivering sensation was gone, and I turned her back in the pasture. I saw she was not looking very well, but could not see that anything particularly ailed her, until about two weeks ago I discovered that she seemed weak in her back and loins, or, at least, when she walks she appears weak in her hind parts. When she walks her hind parts reel around to one side or the other, and going down a sloping place her hindquarters will stagger around so as to almost turn her around. She eats heartily, digests her food well, has no fever and her lungs are all right."

ANSWER:—The disease is paralysis in the hindquarters, and the seat of the morbid changes is probably either in the spinal cord or its surrounding membranes. You may apply, if you choose, a good counter-irritant above the lumbar vertebrae. Oil of cantharides, the composition of which has been repeatedly given in these columns, will answer, and if chosen, the application may be renewed on the fourth day. Still, a cure is but seldom effected.

Exostosis.—J. N. D., Cedarville, Cal., writes: "My horse has a lump on his jaw, which I first noticed about eight months ago. It is about four inches from the fork of the jaw on the edge of the bone. When first noticed it seemed to be a bone growing out from the jaw and was about the size of a lead pencil and one half inch long. It is now as large as a small marble and seems to be broken loose from the bone."

ANSWER:—The enlargement (lump) you describe seems to be an exostosis (an outgrowth of the bone). To remove it requires an operation. The skin has to be opened with a sharp knife, to be cut loose from the bony growth so as to lay the latter bare; then the growth is to be removed, according to circumstances, either with a fine saw, with a strong and sharp knife (a good hoof-knife will answer), or with chisel and mallet. If the latter are used and splinters or a rough edge are produced, the same must be removed with a knife. After this has been done, the wound is to be cleaned with a five-per-cent solution of carbolic acid; superfluous skin has to be removed so that the borders of the wound exactly fit if drawn together; a few stitches are put in, and then the blood, etc., is washed off with the carbolic acid solution. Want of space forbids to give a more detailed description. It may be necessary to throw the animal for the operation. If, however, the same is naturally quiet, a good twist on the nose may be sufficient to make it possible to perform the operation on the standing animal.

Puerperal Fever.—H. R. G., West Middlesex, Pa., writes: "I ask for the name and treatment of a disease among cows. It attacks them about twenty-four hours after calving. They become weak and finally stagger and fall down and soon die."

ANSWER:—Your cows have died from puerperal fever, or so-called parturient apoplexy. If your cows are good milkers and in an extraordinarily good condition, reduce their food three or four weeks before calving, and for two weeks afterward leave them their calves for at least a week or ten days after they are born; and last, but not least, keep your stable scrupulously clean, dry and well ventilated, and further attacks, very likely, will not take place. If they should, in spite of the precautions, inject a gallon of a blood-warm solution of corrosive sublimate, 1 to 1,500, into the uterus as soon as the very first symptoms make their appearance, but do not use a tin or other metallic vessel or syringe in preparing or injecting the solution.

Worms.—C. P., Pavilion, N. Y., writes: "Can you tell me what kind of a worm the enclosed is? They are troubling my four-year-old mare. She passes them quite freely and her coat looks dull. She is in moderate flesh. I also have an old mare that is troubled in the same way. What shall I give to destroy them?"

ANSWER:—I cannot tell you, because the worm you sent in your letter arrived in a shrunken and dilapidated condition. It looks, though, like one of the strongylidae. Worms in the rectum are best removed by one or more injections of raw linseed oil—a pint or more of warmed oil to be injected at once. Worms in the interior part of the intestinal canal require internal medicines. If in horses, one or two good doses of tartar emetic, two or three drachms for a dose, combined with powdered licorice root and powdered marshmallow root, and given in the shape of pills, will answer. It is necessary, though, to give the medicine on an empty stomach and to let the animal fast for six hours afterward. In order to restore the affected animals to health and to a good condition, also to prevent a further invasion of the worm brood, it will be necessary to feed nothing but what is sound and good, to give plenty of good oats, to water exclusively from a good well, avoiding all water from ditches, stagnant pools, etc. It is principally the latter that contains the worm brood.

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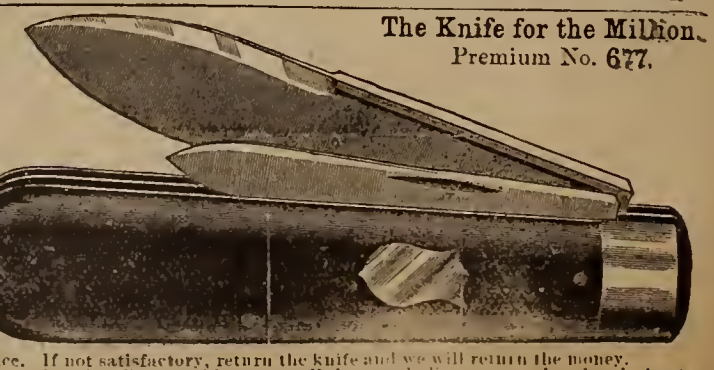
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Our Miscellany.

"SENDIN' HIM OUT IN THE WORLD."

"William," the brown-haired matron said,
As she stood in the kitchen door,
"There's a vacant chair by the table to-night,
That's never been vacant before."

She wiped a tear from her hazel eye,
And turned to walk away—
"Katie," he said, "the baby, you know,
Must be a man some day."

That morning the boy of their happy years
Had gone from the farm-house door,
To try his hand in the world's broad field,
And double his talents o'er.

For years he had lived and loved with them,
And lifted each load by the way—
But brothers were there, and "the baby, you
know,
Must be a man some day."

So they tied his clothes with a tender care
And brushed back the hair that curled—
The mother wept as she whispered low—
"Sendin' him out in the world."

'Tis a solemn thought for a mother to think,
As she watches the baby grow—
Some day these hands shall till and toil,
When life's dull hopes are low.

Some day these dimpled, dainty cheeks
Shall brown in the burning sun,
As far away from a mother's care
His duties must be done!

Some day, when manhood's high estate
Comes on with flags unfurled,
The mother will sigh as she sweetly thinks—
"Sendin' him out in the world."

—Bert W. Huffman, in Oregon Scout.

BEECHAM'S PILLS cure Sick-Headache.

Don't worry, as it interferes with the healthful action of the stomach.

To prevent lockjaw, smoke the wound with burned wool or woolen cloth.

HORSES will thrive better if a lump of rock salt is kept constantly within their reach.

It is not always good policy to eat what you crave. Eat what you know agrees with you and avoid all else.

EAT to live and do not take any more food than you find to be necessary to maintain health and strength.

A DISH of plain, nourishing soup is a wholesome first course at dinner, as it warms and invigorates the stomach.

For the making of good bread, three things are indispensable—the right kind of flour, good yeast and careful baking.

EVERY owner of live-stock and every married woman should see the advertisement on this page, headed by grandpa and his big hat.

A SMALL box filled with lime and placed on a shelf in the pantry or closet will absorb dampness and keep the air in the closet dry and sweet.

Be ready for Christmas. The New Parlor Game beats everything for men, women and children. The Elastic Tip Co., Boston, Mass., will mail you the Game for 75 cts., if your dealer has not got it.

NEVER put away food in tin plates. Fully one half the cases of poison from the use of canned goods is because the article was left or put back into the can after using. China, earthenware or glass is the only safe receptacle for "left overs."

OIL of peppermint, in water, diluted even to one part in one million, will kill cockroaches in an hour, they dying in convulsions. One drop of the oil placed under a bell jar covering a cultivation of cholera bacilli will kill both bacilli and spores in forty-eight hours.

HIS PROSPECTS WERE GOOD.

Every other day ushers in a new paper in Georgia. An editor who is a recent acquisition to the fraternity was asked about the prospects of his paper.

"First-class," he said.

"Ever had any experience in the business?"

"None at all."

"Many subscribers?"

"None at all."

"Why, how can you say your prospects are first-class?"

"Well," said the editor, in a confidential whisper, "I've just started, you see, and haven't had time to canvass the county, but I know my prospects are good. I had not been in the town twenty-four hours when the mayor called and appointed me superintendent of streets; the minister prayed for me and elected me a member of the church charity board; the schoolmaster invited me to deliver a commencement address; the proprietor of the hotel invited me to dinner, and the whole town voted me a free lot in the cemetery. Ain't this doing first-class? 'We are here, and here to stay!'"—*Ex.*

CONSUMPTION CURED.

An old physician, retired from practice, had found in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 250 Powers' Block, Rochester, N. Y.

A WIFE'S DISCLOSURE.

A wife recently gave her husband a sealed letter, begging him not to open it till he got to his place of business. When he did so he read:

"I am forced to tell you something that I know will trouble you, but it is my duty to do so. I am determined you shall know, let the result be what it may. I have known for a week that it was coming, but kept it to myself until to-day, when it has reached a crisis, and I cannot keep it any longer. You must not censure me too harshly, for you must reap the results as well as myself. I do hope it won't crush you."

By this time the cold perspiration stood on his forehead with the fear of some terrible, unknown calamity. He turned the page, his hair slowly rising, and read:

"The coal is all used up! Please call and ask for some to be sent this afternoon. I thought by this method you would not forget it."

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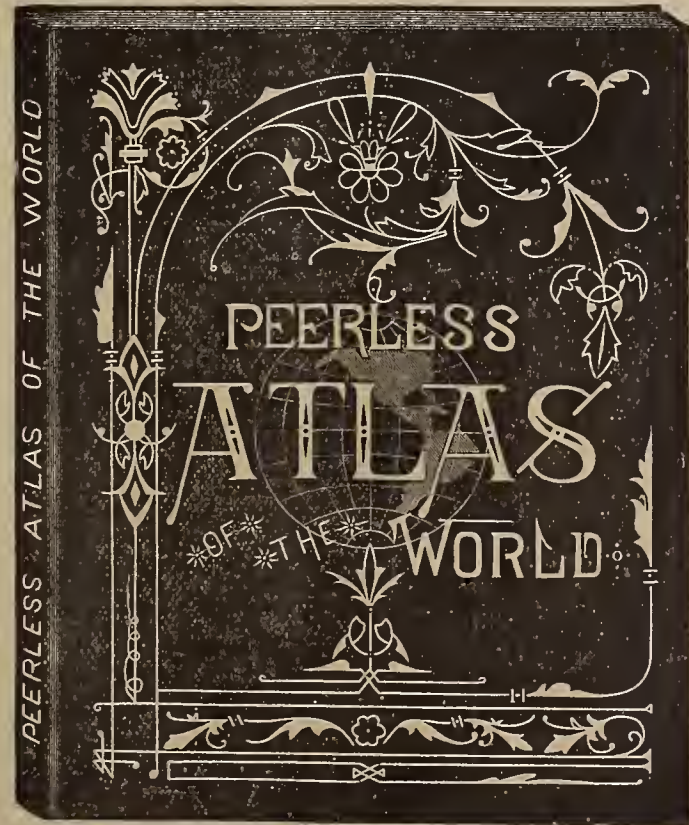
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Smiles.

DROLL BILKINS.

Oh, Bilkins is a sad, droll dog,
He really makes me laugh;
And those who think they know him well,
They do not know him half.

I lately met him in a car,
And saying, "By your leave,"
I brushed away a long, black hair,
That nestled on his sleeve.

"Dear me, how long my hair has grown;
I'll have it cut," he said;
Which made me smile, considering that
His hair is short and red.

—Boston Courier.

STARTLING A STRANGER.

DOWN below Natchez, while the boat was running in close to the left-hand bank and had stopped her wheels to avoid a big tree floating in an eddy, we saw a native sitting on a stump fishing. He sat bent over, hat over his eyes, and there was scarcely a movement to tell that he was alive. We had a smart Aleck with us on the promenade deck, and he had no sooner caught sight of the native than he called to one of the deck hands to toss him up a potato. A peck or more of the tubers were lying loose near a pile of sacks, and one was quickly tossed up.

"Now see me startle him," said Smart Aleck, as he swung his arm for a throw.

The distance was only about a hundred feet, and his aim was so true that the potato landed on the native's head with a dull thud. His motions were so quick that we couldn't agree as to how he did it, but in about three seconds he had dropped his fish-pole, pulled a revolver as long as his arm, and fired at Smart Aleck. The bullet bored a hole in his silk hat, just above his hair, and the young man sank down in a heap and fainted dead away. When we restored him to his senses he carefully felt of the top of his head, looked back at the fisherman and absently asked:

"Did she explode both boilers, or only one?"

THE REASON WHY.

A well known newspaper man, of this city, whose custom it is to take long walks in the country, was out last Sunday, says the *Washington Star*. As he passed an orchard he noticed all the trees but one well filled with apples.

"That's strange," he remarked to his companion.

"What's the reason, do you imagine?" asked the other.

"Here comes a boy. I'll ask him," and the journalist tackled the boy.

"Fine apples you have for an off year," he said, with an air of freedom and acquaintance with the facts.

"Kinder," replied the boy.

"Where do you sell them mostly?"

"Mostly don't sell 'em. Make cider."

"Ah, are they cider apples?"

"Course; couldn't make cider if they wasn't."

"Very true. By the way, my boy, I notice one tree over there by the fence hasn't an apple on it. Do you know why that is?"

"I reckon."

"Well, my friend here and I are a little curious and would like to have you tell us if you will."

"Certainly. It's 'cause it's a plum tree, mostly."

The man of inquiring mind hung his kodak over his shoulder and went on.

THE INDIAN COMMISSION.

On hearing the evidence of "Snowball-in-the-eye," of the Sagwapp tribe, who had been in England with Cody's wild west show, the commission broke into emotion too deep for utterance. He said:

"I am bursting with emotion, and nothing but my war-whoops hold me together. You notice the quiver in my voice. It is all the quiver I have left. Soon the United States will be left with 'nary red' and will not be worth a single Sioux. We are broken-hearted at the white man's scorn; corn, I may say, distilled into a robust form of drink. Our Blackfeet are disappearing over the mountains, our Flatheads are marks for the white man's little hatchet, and our Snakes are all in our boots. The Crows have caws for their complaint. If we strike, they ring in freckled Irishmen on us at four dollars a week. They gave the public a good show, but did not give us any show at all. The black-eyed maiden on Bull creek waits for us. Westward the star of Bill's show takes his way, you bet. I wish to be reserved and will retire to the reservation. I have said."—Judge.

HE WAS HONEST.

Wife (reading paper).—"I always held that Col. Hooker was an honest man. I see that a man filled him full of buckshot last night."

Husband.—"Where does the honest part come in?"

"Why, this article says the Colonel returned the shot."—Life.

DRIVEN TO IT.

Kind Lady.—"If you need clothing, I can supply you with an old suit of my husband's; but they'll be about four sizes too big for you."

Tramp.—"Never mind, mum; I'll wear 'em. I'd rather be mistook for an Anglo-maniac than freeze."—*New York Weekly*.

KILLING IT'S SALE.

"What's that?" exclaimed the ambitious author, "the sale of my book suddenly drops to nothing, after going off so rapidly?"

"Yes," replied his publisher. "You see, a judge has just decided that there is nothing bad about it."

LITTLE BITS.

Some men buy umbrellas; some men achieve them, and some get wet and swear.—*Texas Siftings*.

Know thyself, and keep the information to thyself. This is good advice.—*Hartford Religious Herald*.

Edward Bellamy has earned \$16,000 by Looking Backward. This is better than Lot's wife, who merely earned her salt.—*Hartford Post*.

"Give me the man who sings at his work," says some gushful writer. Do. Give him to anybody that wants him.—*Washington Post*.

Sniggins (angrily).—"Do you know that your chickens come over in my yard?"

Snooks.—"I supposed that they did, for they never come back again."—*New York Herald*.

Wickwire.—"Going to hear the lecture tonight on 'The young woman of to-day?'"

Yabsley.—"Guess not. The young woman of to-night is more interesting to me."—*Terre Haute Express*.

"Father," said Willie, "did Columbus discover the Atlantic ocean?"

"Why, certainly not. What made you ask such a question?"

"My joggerfy says he came across it."—*Washington Post*.

"This bell," said a well-meaning sexton, when showing the belfry of an interesting village church to a party of visitors, "is only rung in case of a visit from the Lord Bishop of the diocese, a fire, a flood or any other such calamities."—*London Figaro*.

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When any one takes advantage of the above offer, the person securing and sending the new subscriber is not entitled to any other premium or reward except one year's subscription to this paper, but the new subscriber can take any premium offered in connection with the paper, by paying the regular price for the paper, including the premium wanted; for example, the regular price of the Peerless Atlas and one year's subscription to this paper is \$1. The new subscriber can have the paper and the Atlas by paying \$1, and the person that goes out and hunts up the new subscriber can have this paper one year free as a reward for his trouble, but is not entitled to any other premium or reward.

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We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,
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For a Disordered Liver
Try BEECHAM'S PILLS.
25cts. a Box.
OF ALL DRUGGISTS.



Children

always

Enjoy It.

SCOTT'S
EMULSION

of pure Cod Liver Oil with Hypophosphites of Lime and Soda is almost as palatable as milk.

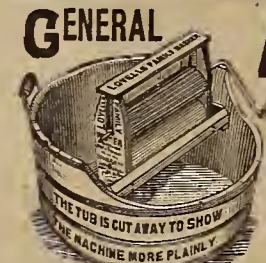
Children enjoy it rather than otherwise. A MARVELLOUS FLESH PRODUCER it is, indeed, and the little lads and lassies who take cold easily, may be fortified against a cough that might prove serious, by taking Scott's Emulsion after their meals during the winter season.

Beware of substitutions and imitations.



Will Play
100 TUNES

To introduce them, one in every County or town furnished reliable persons (either sex) who will promise to show it. IF DESIRABLE MUSIC BOX CO., P. O. Box 2126, N. Y. City.



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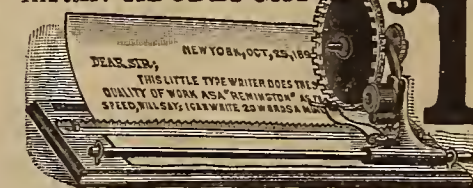
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FROM \$75 to \$150
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LADIES have great success selling this Washer. Retail price only \$5. Sample to those desiring an agency \$2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars. LOVELL WASHER CO. 101 Huron St. ERIE, PA. Mention this paper.

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THIS IS THE TYPE USED: ABCDEFGHI



A perfect and practical Type Writing machine for only ONE DOLLAR. Exactly like cut; regular Remington type; does the same quality of work; takes a fool's cap sheet. Complete with paper holder, automatic feed, metal type wheel & inking roll. 11 manifolds & uses copying ink; in fact does all of the work of a \$100 machine. Speed, 15 to 25 words a minute. Size, 3x4x9 inches; weight, 12 oz. BENTON'S TYPEWRITER. Satisfaction guaranteed. Circulars free. AGENTS WANTED. Sent by express for \$1.00; by mail, 15c extra for postage. R. H. INGERSOLL & BRO., 65 Cortlandt St., N. Y. City.

Guaranteed Watch
\$2.75.



Required Until After
FULL EXAMINATION.
14K GOLD
AND SOLID GERMAN SILVER.
The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold covering the finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth back, finished to a dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, the case contains no other but gold and the finest quality of German silver and in fact it is in every way, except intrinsic value, equal to a \$50 solid gold watch. The movement is a fine 3-4 plate style, finely jeweled polished pinion, oil tempered main spring which does not break, and all the latest improvements. A guarantee is sent with each watch that it will keep accurate OUR 90 DAY OFFER. That all may have this beautiful watch in their own hands and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the expressage \$2.75 or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowing the fine qualities of this watch we make the above offer, as any one wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address WILLIAMS & CO., 125 S. Halsted St., Chicago, Illinois. Mention this paper.

MINIATURE PHOTOGRAPHS 12 for 25c. Sample 2c. Copied from your photograph or tintype which we RETURN THE BARTHOLOMEW STUDIO, WALLINGFORD, CONN.

CARDS FREE 25 LOVELL WASHER CO. 101 HURON ST. ERIE, PA.

Eats More to Keep Warm.

A man's horse is his most useful servant. He will live 25 or 30 years if properly cared for, and do hard work all the time; but if uncared for he won't live half that time. Is it not money in your pocket to blanket your horse in the stable and keep him strong, well and valuable?

A horse not blanketed in the stable eats more to keep warm than a good blanket costs.

If you want a good blanket that will wear insist on getting a genuine 5/8 Horse Blanket. Beware of imitations.

Always look for the 5/8 Trade-Mark sewed inside.

5/8 HORSE BLANKETS are made by Wm. Ayres & Sons, Philadelphia, and are for sale by all dealers. If you can not get them from your dealer write them. There are Thirty Styles at prices to suit all. Among them are the 5/8 Five Mile, with five miles of warp threads in each blanket. 5/8 Boss Stable, a giant for strength. 5/8 Electric for out door use, very strong. 5/8 Extra Test which stands the highest test for strength. Also the celebrated 5/8 Baker which is used by railroad, express and fire companies in all the large cities. These are shown in the 5/8 Book, which you can get free from your dealer. Ask for it.



30 DAYS' TRIAL FREE!

An Unparalleled Offer.

Don't buy a worthless watch, a watch that can't stand the test is dear at any price. This cut is the picture of our new

LEADER positively guaranteed to keep absolutely perfect time, variation will not exceed 30 seconds a month, full and richly jeweled in solid nickel plate, superbly damasked, compensation chronometer balance, hard enamel dial, quick train adjusted to all positions. Jewels carefully selected and of the first quality, stem wind and stem set, one of the handsomest and most perfectly adjusted time pieces ever placed upon the market at any price. Fitted complete with the World renowned

DUEBER celebrated hunting silver watch case; superior to coin silver in all respects, harder, more durable, brighter and retains its polished surface better than coin silver. Warranted by the great DUEBER CO., to wear and keep its color for a lifetime.

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As a proof that this is the greatest bargain in a really fine watch ever offered, and that it is worth at least three times the price asked, and different from the many worthless watches advertised by unscrupulous and irresponsible firms, we make the following unprecedented offer for the next 30 DAYS ONLY.

REAL! Cut this out and send it with your order, and we will ship the watch to you by express C. O. D. If on examination at the express office you find it as represented, deposit with express agent the amount, \$7.50, and the express charges, and take the watch. The agent will hold the money for 30 days while you wear the watch and find out for yourself whether it is all we claim or not. If at the end of this time you find that it is not exactly as represented, you can return it and get your money back. Can anything be fairer! Can you afford to miss such an opportunity? Write at once as this offer will positively last for 30 DAYS ONLY.

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A WHOLE PRINTING OUTFIT, COMPLETE, PRACTICAL & PERFECT. Just as shown in cut. 3 Alphabets of neat Type. Bottle of Indelible Ink. Pad, Tweezers, a nest case with catalogue and directions "HOW TO BE A PRINTER." Sets up any name, prints cards, paper, envelopes, etc., marks linen. Worth \$10. BEWARE of cheap COUNTERFEITS. Postpaid only 25c, 3, 6, 6 for \$1. Agents wanted. INGERSOLL & BRO., 65 CORTLANDT ST. N. Y. CITY.

A BIG OFFER

50c. MADE IN A MINUTE! If you will hang up in the C. O. D. some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance.

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Nasal Catarrh can be easily, quickly, pleasantly, and lastingly cured, providing one knows how. I do know how, can do it, and guarantee just such a cure. My HEALING CATARRH POWDER (perfectly soluble) will positively and effectually cure in a few days only any ordinary case not complicated with scrofula. There is no humbug and no disappointment about it. I know what I am talking about, and what I say is the TRUTH; if not, denounce me in this paper as a fraud. Many thousand packages sold in past twelve years, and I hereby declare upon oath that I seldom have a complaint, and do not know of a failure to cure in all that time. It is perfectly harmless, safe and pleasant to use, clears the head without sneezing, purifies, heals, stops and cures every discharge from the nose, sweetens the breath, and cures Catarrh in all its stages. A package, enough to last two weeks, and more than enough to surely and infallibly cure nearly every case, sent post-paid for only 25 cents by GEO. N. STODDARD, 1226 Niagara St., Buffalo, N. Y. Have been in drug business in Buffalo over 22 years. Have my own good reasons for offering this incomparable remedy at so low a price. Attention this paper.

Do not fail to mention this paper when you write to advertisers.

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SEND FOR OUR CATALOGUE AND PRICES

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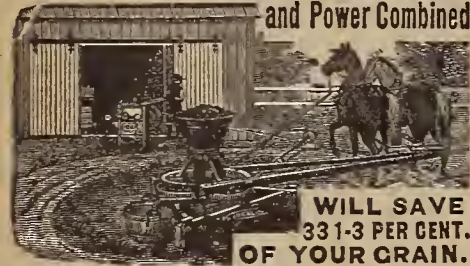
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APPLETON

GRINDING MILLS

Which will GRIND from 10 to 20 BUSHELS PER HOUR. doing the work as well as any \$50 mill on the market. Can be run by any tread or sweep power, or geared wind-mill. 2, 4, or 6 HORSE POWER. Extra set of grinding burrs free. One set of burrs will grind one to three thousand bushels. Satisfaction guaranteed. Sent on 10 days' trial. Send for illustrated Catalogue of our 26 other sizes of Mills, Feed Cutters, Wood Saws, Horse Powers, Corn, Cob and Shuck Mills, &c. **APPLETON MANUFACTURING CO** 19 and 21 So. Canal St., CHICAGO, ILL. Be sure to mention this paper.

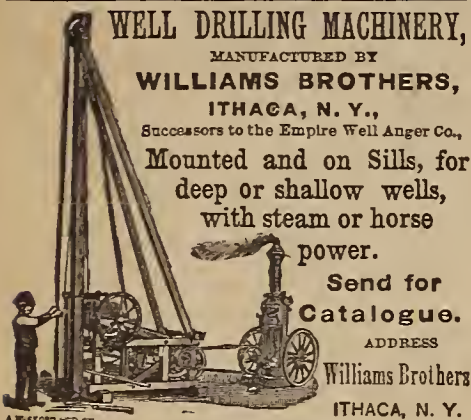
IDEAL FEED MILL



WILL SAVE 33-1-3 PER CENT. OF YOUR GRAIN. Remember it grinds EAR CORN and all kinds of grain FASTER AND BETTER than any other. Our line comprises Everything in the shape of GRINDING MILLS. Address for catalogue, **STOVER MFG. CO., 507 River Street, FREEPORT, ILL.** Mention this paper when you write.

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Sows CLOVER, TIMOTHY, RED TOP, and all kinds of GRASS SEEDS. Sows any quantity—wet, dry, and windy weather. 20 to 40 Acres per day. Weight 40 lbs. **O. E. THOMPSON & SONS,** Send for circulars. No. 12 River Street, YPSILANTI, MICH.



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MANUFACTURED BY **WILLIAMS BROTHERS, ITHACA, N. Y.,** Successors to the Empire Well Anger Co., Mounted and on Sills, for deep or shallow wells, with steam or horse power. Send for Catalogue. ADDRESS Williams Brothers ITHACA, N. Y.

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for evaporating MAPLE SAP, SORGHUM and CIDER. Have Perfect Working AUTOMATIC Regulators. Have no troublesome syphons. Furnished with covers which greatly increase capacity, and with or without the fire-box or arch. Improvements overcome deposits of Malate of Lime that give so much trouble in other Evaporators. Iron arches have dampers to turn heat from under last section allowing sugaring off in Evaporator. Many thousands in use. Guaranteed to evaporate faster with same fuel than any imitation on the market. Catalogues free. **VT. FARM MACHINE CO., Bellows Falls, Vt.** Mention Farm and Fireside.

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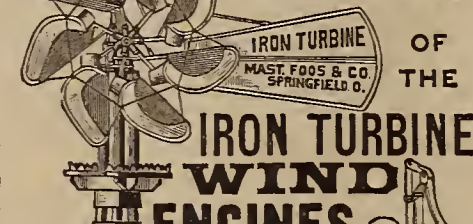
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Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind. **BUCKEYE FORCE PUMP**

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the **BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc.** Write for Circulars and Prices. Always mention this paper.

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You can Repair your own Harness, Halters, etc., without expense or loss of time, and make a nice, clean job. No sewing or riveting. A common hammer will do the work. Ask your dealer for them, or sent by mail on receipt of price, only 25 cents per gross. **Buffalo Specialty Mfg. Co., Buffalo, N. Y.** Mention this paper

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Best in Market. Wells Made and Machines sold anywhere. Send for circular. Mention this paper. **Rust Artesian Well Co., Ithaca, New York.**

Champion Evaporator.

For MAPLE, SORGHUM, CIDER, AND FRUIT JELLIES. Corrugated pan over firebox, doubling boiling capacity. Small interchangeable syrup pans (connected by syphons), easily handled for cleansing and storing, and a Perfect Automatic Regulator. The Champion is as great an improvement over the Cook Pan as the latter was over the old iron kettle, hung on a fence rail. **The C. H. CRIMM MFC. CO. HUDSON, OHIO.** Catalogues Free. Mention this paper.

PORTABLE, STATIONARY AND TRACTION ENGINES

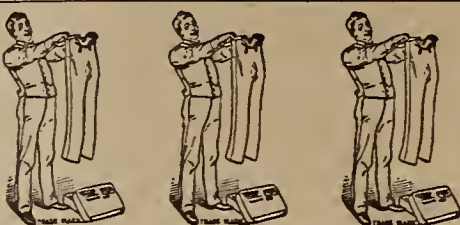
AND SAW MILLS **McNAMAR Machine Works, Newark, Ohio.** Send for Circular. Mention Farm and Fireside.

U. S. BALE-TIE MAKER.

Makes loop, straightens wire and cuts off with one movement of the lever. Lightning Lifting Jack, for hay presses, wagons, etc. All steel and very powerful. Self-adjusting Wire Reel. Best in the world. Takes any size coil. Also Hay Presses and Hay Press Supplies of all kinds. Weighing attachments and repairs for any press. Send for prices and catalogue. **U. S. HAY PRESS SUPPLY CO., KANSAS CITY, MO.**

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Handsomely illustrated and devoted to Fiction, Fashion, Flowers, Fancy Work, Home Decoration, Art Needlework, Cooking, Housekeeping, everything pertaining to Woman's Work and Woman's Pleasure. Every article contributed expressly for The Housewife by such writers as ROSE TERRY COOKE, MARION HARLAND, HARRIET PRESCOTT SPOFFORD, JENNY JUNE, MARIA PARLOA, and JULIET CORSON. 50 cents a year.—But See Special Introduction Offer above. Mention this paper. THE HOUSEWIFE PUBLISHING CO., N. Y. CITY.



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All these things are true of the Famous Plymouth Rock Pants, Suits and Overcoats. Prices, \$3.00 to \$8.25 for Pants. 13.25 to 35.00 for Suits. 12.00 to 35.00 for Overcoats.

A book of Samples FREE by mail to any address in U. S. See how business grows. Address all mail to headquarters

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FEW EQUAL! NONE BETTER!

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1891. Home Grown, Honest, Reliable.

I offer you my Vegetable and Flower Seed Catalogue for 1891 FREE. Note the immense variety of seed it contains, and that all the best novelties are there. Not much more show about it (you don't plant pictures) but fine engravings from photographs of scores of the choice vegetables I have introduced. Would it not be well to get the seed of these from first hands? To be the oldest firm in the United States making mail and express business a specialty proves reliability. Honest and honorable dealing is the only foundation this can rest on. My Catalogue is FREE as usual. A matter on second page of cover will interest my customers. **J. J. H. GREGORY & SON, Marblehead, Mass.**



We Lead the World in Roses.

We can safely say, in the past 25 years, our establishment has distributed more millions of Roses than any other in the world. The KNOW-HOW of producing plants that will thrive where others fail is OUR SECRET. Fit company for our ROSES are our Hardy Ornamentals, Popular Flowers, Summer Bulbs, Flower and Garden Seeds, all prepared for the best retail trade—PRICES CORRECT. Orders range from 10 cents to \$150—ALL ARE WELCOME. The NEW GUIDE 124 pages illustrated—complete—tells how to buy—FREE TO ALL interested, on application. Orders by mail postpaid to all postoffices—Safe arrival and satisfaction guaranteed. **THE DINGEE & CONARD CO., WEST GROVE, PA.**

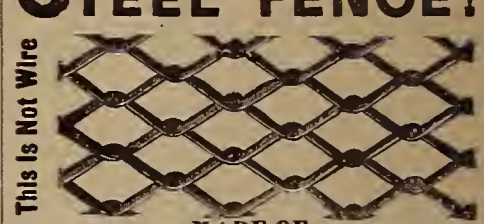
"ASPINWALL" POTATO PLANTER

DISTRIBUTES FERTILIZERS The Triumph of Modern Invention. Illustrated Circular sent free. **ASPINWALL MFG CO., Three Rivers, Michigan.**

KNABE PIANOS.

UNEQUALLED IN Tone, Touch, Workmanship and Durability. BALTIMORE, 22 and 24 East Baltimore Street. New York, 148 Fifth Ave. Washington, 817 Market Space

A SOLID STEEL FENCE!



MADE OF EXPANDED METAL CUT FROM STEEL PLATES. SOMETHING NEW.

FOR RESIDENCES, CHURCHES, CEMETERIES, FARMS GARDENS, Gates, Arbors, Window Guards, Trellises, Fire-proof PLASTERING LATH, DOOR MATS, &c. Write for Illustrated Catalogue; mailed free **CENTRAL EXPANDED METAL CO 116 Water St., Pittsburgh, Pa.** Hardware Men keep it. Give name of this paper

Illustrated Catalogue free. "OSGOOD" SCALES

U. S. Standard 3 TON \$35. Sent on trial. Freight paid. Other sizes proportionately low. Fully Warranted. **OSGOOD & THOMPSON, Binghamton, N. Y.**

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I offer you my Vegetable and Flower Seed Catalogue for 1891 FREE. Note the immense variety of seed it contains, and that all the best novelties are there. Not much more show about it (you don't plant pictures) but fine engravings from photographs of scores of the choice vegetables I have introduced. Would it not be well to get the seed of these from first hands? To be the oldest firm in the United States making mail and express business a specialty proves reliability. Honest and honorable dealing is the only foundation this can rest on. My Catalogue is FREE as usual. A matter on second page of cover will interest my customers. **J. J. H. GREGORY & SON, Marblehead, Mass.**



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We can safely say, in the past 25 years, our establishment has distributed more millions of Roses than any other in the world. The KNOW-HOW of producing plants that will thrive where others fail is OUR SECRET. Fit company for our ROSES are our Hardy Ornamentals, Popular Flowers, Summer Bulbs, Flower and Garden Seeds, all prepared for the best retail trade—PRICES CORRECT. Orders range from 10 cents to \$150—ALL ARE WELCOME. The NEW GUIDE 124 pages illustrated—complete—tells how to buy—FREE TO ALL interested, on application. Orders by mail postpaid to all postoffices—Safe arrival and satisfaction guaranteed. **THE DINGEE & CONARD CO., WEST GROVE, PA.**

"ASPINWALL" POTATO PLANTER

DISTRIBUTES FERTILIZERS The Triumph of Modern Invention. Illustrated Circular sent free. **ASPINWALL MFG CO., Three Rivers, Michigan.**

"Planet Jr." Improved Farm and Garden Tools for 1891.

BETTER, Both Horse & Hand, THAN EVER; better and more money saving. We cannot describe them here, but our new and handsome catalogue is free and interesting. A goodly number of new tools will meet your eye there. Among these, Gardener's Harrow, Cultivator & Pulverizer, combined, adjustable teeth; Market Gardener's & Beet Grower's Special Horse Hoe with Pulverizer; Special Furrower, Marker and Ridger, adjustable wings; Sweet Potatoe Horse Hoe, four tooth with vine turner; Heavy Grass Edger and Path Cleaner; new Nine Tooth Cultivator and Horse Hoe combined; Special Steel Leveler and Pulverizer combined; all interesting, nothing we have ever made so practical or perfect. Some improved things too are grafted upon our older favorites. A capital LEVER WHEEL, instantly adjustable for depth, is a great feature; put on all '91 goods unless ordered otherwise. Nor have our Hand Seed Drills been forgotten in the march of improvement, nor our Double and Single Wheel Hoes, Garden Plows, Grass Edgers, Etc. Some of them are greatly altered for the better; yet do not forget that no novelties are adopted by us without actual and exhaustive tests in the field. We therefore guarantee everything exactly as represented. Send for Catalogues now. **S. L. ALLEN & CO., Philadelphia, Pa.**

FARM & FIRESIDE

4 EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XIV. NO. 8.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JANUARY 15, 1891.

TERMS {50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,600 COPIES.

The Average Circulation for the 24 issues of
the full year, 1890, has been

250,700 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,200 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has the Largest Sub-
scription List of any Agricultural
Journal in the World.

Current Comment.

Not being the organ of any organiza-
tion, this paper can fearlessly and
independently either condemn or
approve the objects, demands or works of
any organization, just as will best serve
the true interests of the farmers. It is
free to indorse any or all of the objects of
any agricultural organization, but is not
bound to indorse all or none. It is in full
sympathy with most of the objects of the
Farmer's Alliance, but it considers the
subtreasury scheme, advocated by the
southern Alliance, impracticable, and has
not hesitated to say so. And it has said
so in the true interests of farmers and not
against them.

Not all the farmers of the country have
gone daft on big financial schemes. Wit-
ness the following resolution passed
recently by the state Grange of Michigan:

"We regret that the National Grange, the
Farmer's Alliance and other organizations of
farmers have indorsed the proposition in
one form or another to make loans by the
government to the people. That the issuing
of \$1,000,000,000 of treasury notes and loaning
them to the people, either directly or indirect-
ly, at a low rate of interest, would lead to a
wild clamor for credit, every intelligent person
must admit. That no system could be devised
or its operation so guarded as to prevent par-
tiality and favoritism in its distribution,
first, to personal friends of the loaning agent,
and next, to his political associates, every
thoughtful man must foresee. That it would
create a feeling of helpless dependency upon
government aid by those whom it is designed
to benefit, thereby relaxing their individual ef-
fort, destroying their energy and self-reliance,
and rendering them helpless mendicants of
government charity, every observer of
human nature must know. That it would
lead to thriftless improvidence, relying on
government aid or government forbearance
by those whom it seeks to benefit, and prove a
curse instead of a blessing, is so plainly evident
that we are surprised that the National
Grange should allow itself to be carried away
by the clamor of those who hope for them-
selves public preferment, by holding out a
scheme so enticing to the ignorant or improv-
ident debtor and scheming speculator."

It is noticeable that the advocates of the
subtreasury warehouse scheme have given
so few estimates of the probable cost of es-
tablishing and running such a system.
There are more than twenty-five hundred
counties in the Union. To build and equip a
suitable subtreasury in each would cost, at
a moderate estimate, over \$500,000,000. The
people are justly complaining that taxes
are already too high. Are they willing
and ready to have them enormously in-
creased? The sum required to establish
the system is more than the annual re-
venues of the government. The people
will not stand the additional taxation

necessary to raise the money to establish
the system. Shall the government issue
more bonds and borrow the money neces-
sary? The credit of the government is so
good that it can borrow money at a low
rate of interest—three or four per cent.
But for it to borrow money at that rate
and loan it out at one per cent, means in-
evitable national bankruptcy. No sav-
ings bank or financial institution could do
business on such a principle. Neither
could the government.

Then again, what a bonanza it would
be for speculators to borrow money at one
and two per cent and reloan it for three,
five or more? These big, financial schemes
are advocated in the interests of the farm-
ers, but as sure as they are once put in
operation, the speculators and money
sharks will reap the lion's share of the
benefits to be derived from them, and the
last state of the farmers will be worse than
the first.

Edward Bellamy, the noted exponent
of nationalism, sees in the farmers' polit-
ical movement the first firm steps toward
the remodeling and nationalization of our
entire industrial system on the basis of
equality and fraternity. He says:

"Primarily the movement is for the re-
lief of the farmers from specific grievances
believed to be remedied by special legisla-
tion. To this extent it is, of course, a
class movement, interesting and impor-
tant as such to a high degree indeed, but
characterized by the narrowness insepa-
rable from any class movement, however
justifiable. It is, however, especially in
its western centers, far more than a class
movement. It attacks the existing in-
dustrial and commercial system on lines
so radical as to be revolutionary. This is
the fact that constitutes altogether the
most significant aspect of the farmers'
uprising. This is the characteristic which
broadly distinguishes it from any mere
political overturn and compels its recog-
nition as a part of the present worldwide
movement of the masses for a radical
change in the industrial system, a move-
ment everywhere so alarming to those
who do not understand it, so inspiring to
those who do. * * * * *

"Whatever the name or form of the
great national party of the people which
is destined in the near future to establish
a nobler and happier civilization in this
land, we may be sure that these farmers
will be found in the ranks. To men who
have once contemplated the ideal of
human brotherhood, and known the en-
thusiasm it inspires, the petty issues of
the so-called great parties cease to have
any meaning."

WITHIN the last ten years about
5,000,000 immigrants arrived in
this country. This is double
the number of the preceding decade. But
with the increase in numbers the quality
has changed for the worse. The immigra-
tion from north-western Europe has fallen
off, and that from the south and east of
Europe has increased. And also the char-
acter of the immigration that now comes
from the countries that formerly sent the
best class has greatly deteriorated. An
alarming proportion of the present immi-
gration is from the helpless and dangerous
classes of the large cities of Europe, ma-
terial out of which it is impossible to ever
make good American citizens. Degraded
foreigners, joining the already crowded
ranks of cheap labor, can only add to the

prevailing discontent and increase the
difficulty of solving the labor problems.

There is a bill now before congress, the
object of which should meet the approval
of every patriotic American citizen. It is
a bill to restrict immigration. Its pro-
visions, if carried out, will keep out
criminals, those who are not self support-
ing, the most ignorant and all the most
undesirable classes of immigrants. The
bill provides that the foreigner intending
to settle in this country, shall first secure
from a consul or other representative of
the United States in his country, a cer-
tificate to the effect that he is sound in
mind and body, able to support himself,
not a criminal, not obnoxious to the laws
of the United States, not assisted by
charity to emigrate, able to read and write
his own language, and to read the con-
stitution of the United States either in
his own language or in English.

The bill will not keep out any desirable
class of immigrants. Only those who can
be admitted under its provisions are fitted
ever to become citizens. The educational
requirement is one of the most important
features of the bill. It would cut off large
numbers of ignorant, cheap laborers that
come over here and enter into disastrous
competition with the most poorly paid
classes of American laborers. Indeed, the
bill, if it becomes a law, will be a very
important measure of protection to Amer-
ican labor of all classes.

ONE reason why the dealers in cotton-
seed oil and the manufacturers of
compound lard so violently oppose
the Conger bill and favor the Paddock
pure-food bill, is that the latter will not
interfere in the least with the fraudulent
retail sale of compound lard as pure hog's
lard. While the bill provides that the
manufacturers shall plainly brand the
packages with the true name of the con-
tents, it will not prevent the retailer from
destroying the labels and from selling
compound lard as pure lard. The law
does not go far enough. The consumer
will not know whether he is buying an
adulterated or a pure article. So far as
bogus lard is concerned, the law is ineffi-
cient to prevent the consumers from being
imposed upon, and that is why the makers
of compound lard favor it. Compound
lard may be a pure, wholesome article of
food, but it should be compelled to be
sold on its own merits.

IN A test case recently brought before
the United States Court at Cincinnati,
it was decided that the Ohio statute
prohibiting the sale of oleomargarine, col-
ored to imitate butter, could not be en-
forced against sellers of original packages
so colored, which were imported from
another state. But the law is valid so far
as it relates to oleomargarine manufactured
in the state, or imported, if offered after
the original packages have been broken.
In a similar case brought before the court
in Philadelphia last month, the judge de-
cided that the Pennsylvania statute pro-
hibiting the sale of oleomargarine, in
packages as originally imported from
another state, is unconstitutional. If the
Supreme Court, to which these cases may
be appealed, should affirm these decisions,
state statutes against imitation butter will
be practically null. Although the laws
still apply to the retailing of oleomar-
gerine after the original packages are
broken, the manufacturers can easily get

around them. All that will be necessary
for them to do will be to put up oleomar-
gerine in packages small enough for the
retail trade. Then the Pennsylvania
maker of bogus butter, although forbidden
a market in his own state, can sell his
product in Ohio, and the Ohio manufacturer
can sell his stuff freely in Pennsylvania.
These packages, under the United States
revenue laws, would have to be branded, and
it may be argued that then the customers
would know just what they were buying.
But in actual practice it would be difficult
to prevent the retailers from tearing off
the labels and palming off oleomargarine
on their customers for butter whenever
they could find an opportunity. The
remedy is to get an act of congress placing
oleomargarine subject to full state control,
similar to the act providing for the reg-
ulation of the inter-state traffic in spirit-
uous liquors.

IN the letter of a sportsman to his
favorite journal appears the following
sentence, written apparently in all
sobriety: "Not all the farmers in this
valley annoy the hunters by posting tres-
pass notices." How very kind and con-
siderate. How thoughtful of the tender
feelings of the city sportsmen who
annually invade the "rooral deestriets"
during the hunting season. How hard-
hearted, sordid and selfish those other
farmers are who "annoy" the hunters by
posting trespass notices. "Annoy the
hunters" is good. Certainly the farmer
does not realize what a grievous annoy-
ance it is to the mighty hunter from the
city to arrive with his dogs and his friends
at his chosen hunting grounds and find
them posted with trespass notices. It is
too late now to help it. The season is over,
and the sportsmen have returned to their
homes, and are now studying what
amendments to the game laws they shall
have the legislature make so as to give
them a better chance next season.

CONSIDERABLE clamor is now being
made against national bank notes.
But by the time their opponents
are in possession of power to legislate
against them there may be very few of
them to legislate against. National bank
notes are based on government bonds.
The approaching extinction of the bonds
means the retirement of national bank
note circulation. But the national banks
are anticipating this time by voluntarily
selling their bonds and retiring their
national bank note circulation. They are
selling their bonds now because they
command a high premium. If they keep
on at the present rate bank notes will
disappear long before the bonds mature.
From \$341,000,000 in 1873, bank note cir-
culation will soon be reduced to about
\$125,000,000.

EASTERN farmers appear to be need-
lessly alarmed about the aid the
national government is giving to
irrigation in the great arid regions of the
West. It is not the purpose of the gov-
ernment to reclaim the deserts and put
them into immediate competition with
the farms of the East, as feared. In mak-
ing surveys and providing that the water
on the public domain available for irriga-
tion purposes shall not fall into the control
of private parties or corporations, but
shall be preserved for the public use of
future settlers, the government is doing a
wise and providential thing.

FARM AND FIRESIDE.

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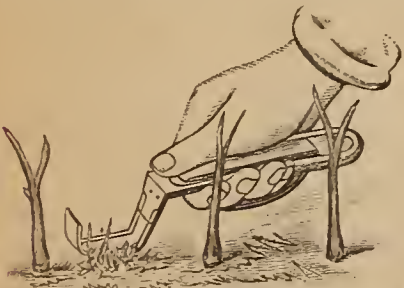
Our Farm.

THE NEW ONION CULTURE.—NO. 2.

BY JOSEPH.

SETTING THE PLANTS.—Little need be said about the preparation of the land, as this is about the same as for growing onions in the old way. The land should be rich, or be made so by heavy dressings of manures. It must have good drainage, but the surface soil need not be deep nor deeply stirred. I do not like to risk deep, loose muck, as there is danger of a crop of scallions instead of well-finished bulbs. Probably the best way of preparing the ground is by plowing in fall, manuring with plenty of fine compost during winter or spring, and stirring this into the surface soil by means of a good harrow, such as the ordinary disk pulverizer or an Acme. In the absence of either, it may be done with a fine-toothed cultivator.

This matter of manuring may need a little more explanation. That you should not expect a 2,000-bushel crop on poor soil is self-evident. Consequently, it would be poor policy to be "saving" with the manure. It takes plenty of it, and I would rather plant a small piece of ground and have the manure put on thick, than plant an acre with just "fairly good" manuring. I apply fine, rich compost several inches deep all over the ground, and after this has been worked in I further put on whatever fine fertilizing materials I may have—ashes, concentrated manures, also the matter collected under the perches of the poultry-house, etc. Nitrate of soda,



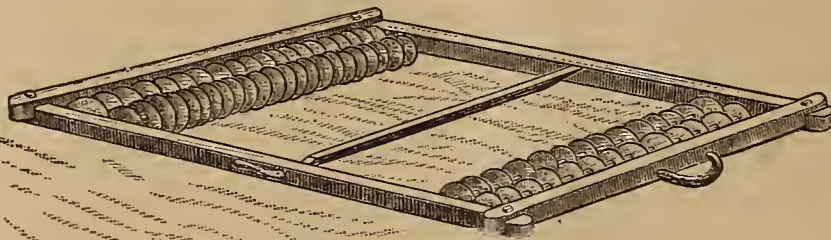
THE LANG'S WEEDER IN USE.

in small doses, is applied every ten days or two weeks during a greater part of the growing season. But all these suggestions apply with equal force to the old as well as to the new mode of onion growing.

The surface of the ground, of course, should be made smooth, as for sowing seed. Wherever the disk harrow is used to stir surface soil and compost together, we should follow with a smoothing harrow or common drag or a "plank" drag, in order to work down the ridges left by the disk pulverizer. In a small way, the ordinary garden rake will answer very well to finish off; but when we operate on a one-acre scale, or even a larger one, the use of the Meeker disk or smoothing

harrow will save us a great amount of hand work, and leave the ground almost if not fully as smooth as does the use of the steel rake. Probably but few of my readers are acquainted with this "Meeker" harrow, and, unfortunately, it is but little used outside of the eastern states, I believe. But the tool is such a great labor-saver in the market garden and on the truck farm that its use cannot be too earnestly urged upon people engaged in these branches of farming. Another unfortunate circumstance is its high price (about \$25), but people having much use for it will save this amount in a short time in the labor account.

Some of my friends, probably, will wish to know what this most excellent tool looks like. The accompanying picture gives a true representation of it. Various seedsmen keep it in stock, among them Mr. Gregory, of Marblehead, Mass.; Messrs. Henderson & Co., of New York City; Mr. Maule, of Philadelphia, and probably others.



THE MEEKER HARROW.

The next thing is the marking. Make a simple hand marker with four or five teeth not much larger than those of a wooden rake, and have them a foot apart from point to point. The object is to make small, narrow marks that can serve as a mere indication of the proper place for the plants. I like to set onions close, in order to grow the largest crop on the area. Greater width than a foot between the rows is a waste of land and opportunity. The rows may be marked out only as fast as needed, but make them straight. Afterwards draw the marker across the length-rows, so as to give you some guide as to the space the plants are to be given in the row. Now take up a lot of plants from the bed; with a trowel, carefully divide and straighten them, and have them distributed just ahead of the planter or planters. In setting them, use a small, sharp-pointed, hard-wood dibber, or stout table-knife (a broken one with blade ground to a point is best), and thrust this into the ground in the proper place, making a small opening in which to insert the onion plant about an inch deep; then again insert the dibber slantingly, about an inch from the plant, and press the soil firmly against the root. With a little practice this is quickly done. People little accustomed to such manipulations can set perhaps 2,000 plants a day; the nimble fingers of expert planters will more than double this number.

I like to have the plants stand as regularly as possible. To accomplish this, a plant is set in each cross-mark and two or three between in the row. This brings them to just three or four inches apart. To the large, foreign onions and the Prize-taker I always give four inches space, while ordinary sorts, such as Yellow Danvers and Red Wethersfield, might be set three inches apart. Even at the larger distance we need about 130,000 plants per acre. As I have said before, this job of setting the plants is the real work of the undertaking, and before we rush into the five-acre venture we should think twice and make sure that we have the help that will be needed for this work. On the other hand, the labor of keeping the weeds down will be slight compared with the old way, and no thinning will be required. Each plant has sufficient room for best development, rendering the crop not only very large, but all the bulbs handsome and of uniform size and more readily salable.

Clean cultivation is, of course, as essential as in the ordinary method of onion growing. A good, hand wheel-hoe (row straddler), such as the Planet Jr., should be diligently used. This is easy work. Later in the season I sometimes use a hand cultivator that goes between the rows. At any event, the soil should be kept well stirred, not only to prevent weed growth, but also to provide a mulch of fine soil all over the ground and thus prevent a too rapid evaporation of the soil water in dry weather. If the weeds start

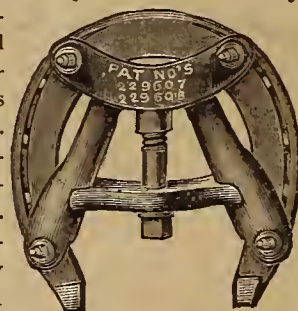
in the rows, they must be removed, which usually can be done with the least trouble by means of a hoe with very narrow blade—for instance, some old, well-worn hoe, the blade of which is cut down by your blacksmith in such a way that the width of the cutting side is not over two and one half inches, leaving the corners sharp. In most cases, especially on weedy soils, a hand-weeder, such as Lang's or Hazeltine's, may have to be used, but the greater part of the work can be done with the narrow-bladed hoe. That all this be done thoroughly and timely is a matter of greatest importance.

Not less important is it that the crop be pulled just when ripe; that is, when the majority of the tops have died down, and that it be properly cured and marketed at an early date. Of course, all this is true, also, of the old way. The chief difference here is that we get the crop considerably earlier, and can place it on the market perhaps two or three weeks earlier, when we follow the new method than we could

under the old one. The advantages of the new one are manifold, and appear especially prominent when the returns from the crops grown under both methods are figured out. Perhaps in some future number I may tell of the methods of curing, storing and marketing. Buffalo commission men were quite enthusiastic about the onions which we consigned to them the past autumn.

ICE-CREEPERS FOR HORSE-SHOES.

The illustration shows a horse-shoe fitted with the Blizzard adjustable ice-creepers. They can be readily attached to any ordinary horse-shoe, and will effectually prevent a horse's slipping on ice. This useful invention is manufactured by S. W. Kent, Meriden, Conn. They can be attached or removed in a very few minutes whenever necessary, and are a great convenience to have on hand to put on your horse's feet in icy weather. The wear all comes on the steel calks, which can be easily replaced.



SUGGESTIONS FROM THE EXPERIMENT STATIONS.

BY JOSEPH (T. GREINER.)

NEW INSECT REMEDIES.—The Arkansas station, as reported in bulletin No. 15 (Fayetteville, Ark.), has, the past season, made experiments with various substances by which it was hoped the cotton worm might be destroyed. One of these substances, the kerosene soap, commonly known under the euphonious name, "sludge," and made from the refuse in the refining of coal oil, proved a failure for the cotton worm, but effective on the pear slug and some other insects.

The station brings out an entirely new insecticide—kerosene extract of pyrethrum—and this may yet prove one of the most effective, and at the same time most inexpensive and harmless remedies yet found. It combines the strength and destructive elements of two well known insecticides, pyrethrum and kerosene oil, in one. It is made by passing kerosene oil through the powdered pyrethrum. The proportions used at the station were two and one half pounds of pyrethrum and one and one half gallons of kerosene. The yellowish, oily extract obtained will not mix with water any more readily than pure kerosene, and has to be formed into an emulsion with soap in a manner similar to kerosene emulsions. One pound of soap is dissolved in one gallon of boiling water, and to this boiling hot mixture one gallon of the kerosene extract is added, mixing with a force pump so thoroughly that the oil will not separate on standing. It requires from ten to thirty minutes steady work, according to the quantity and

the force used. On cooling, the emulsion will be a thick, creamy mass, which is to be diluted or reduced to one part in 450 or 500 parts of water before applying. It is harmless to those who handle and apply it, and on cotton, for the cotton worm, costs about five cents per acre.

This estimate of cost looks ridiculously small. The station people figure the cost of pyrethrum at only 30 cents a pound. It would probably be better to use the California product (buhach), which costs about 75 cents a pound, and if desired, a smaller quantity of it might be employed. Still, as the expense is so trifling anyway, there is no cause for economy. This remedy appears to me decidedly promising, and we might try it for almost all the pests that at present trouble our garden and fruit crops, such as cabbage lice and worms, all aphides, asparagus beetle, currant worms and all caterpillars. The remedy might be made much stronger than the proportions given; and as it is applied in spray form, will yet be cheaper than any other remedy we might use. Even if quite strong it will not do any perceptible harm to tender foliage. Of course, this remedy kills by contact, not from being eaten.

Another new remedy found by the station is "veratrine." Mixed with flour in the proportion of one pound to 64 parts of flour, this powder was by far the most effectual in its work of any tried, and bids fair to be a rival of Paris green and London purple. It kills both by contact and from being eaten. When it comes in contact with the worm there at once begins to be a marked uneasiness, followed almost immediately by trembling and writhing, during which it falls to the ground, probably never to recover. Should it, however, recover sufficiently to return to the plant, as soon as it begins eating, a small quantity proves fatal. There is much similarity in effect to that of Paris green, except that the veratrine shows more effect on contact, while Paris green seemed somewhat quicker in its effect when eaten. The cost of both mixtures (veratrine and Paris green) is about the same. In the foregoing we have two remedies which have every appearance of being of great value. They will be largely tested the coming season.

THE SQUASH BEETLE.—Prof. Clarence M. Weed reports in bulletin No. 8, Vol. III. of the Ohio station, a series of experiments made with so-called remedies for the yellow-striped squash beetle. The only thing that proved to be a complete protection against its ravages was fencing the pest out by mechanical barriers, such as boxes or similar devices covered with muslin. Dusting peroxide of silicates on the plants seemed to save at least part of them, while Paris green, heliobore and slug shot, similarly applied, seemed to have next to no effect in protecting the plants from injury. Tobacco dust proved a valuable application. A shovelful of the dust was thrown upon each hill. The beetles seemed to dislike working in the tobacco, and the plants on all of the hills treated came through in good condition. Aside from its value as an insecticide, the tobacco acts both as a mulch and fertilizer. Analysis shows that its market value as a fertilizer is \$25 per ton, says Mr. Weed. In many eastern cities it is being utilized, but in Columbus many of the factories are glad to give this refuse to any one who will take it away.

Mr. Weed's word is good enough authority for the truth of the statement, and yet it hardly seems credible that so good a fertilizing material should be offered in this way without finding ready takers. I know if I lived near Columbus I would use tobacco refuse very largely as a fertilizer if I could get it by taking it away, or even at a low price. We could well afford to give \$15 to \$20 for an average quality of it for fertilizing purposes alone. But aside from this I am in the position to endorse Mr. Weed's high opinion of the stuff in its capacity as an insect repeller. I used it freely on my vines, last season, and I also made the observation that the beetle did not like tobacco flavor. For all that, it is not an absolute protection, and we should not indulge the idea that a little sprinkling on the plants will answer. The way to do is to cover the ground around the plants several inches deep, and if the plants are kept partially covered, all the better. When you can have the stuff "for taking it away," the application is not

expensive. It is so to some extent when you have to pay \$3 per barrel and freight for it; but at the same time it is profitable to use it.

RHUBARB CURCULIO.—A snout beetle (*Lixus concavus*) has been observed to do some injury to the rhubarb or pie-plant. The Ohio station tells us that the life history of the insect in its earlier stages has now been discovered. In this region the rhubarb curculio usually hibernates as an adult, and comes forth in the spring to deposit its eggs in certain common species of dock. It seems evident that the best way of preventing its injuries will be to destroy, early in the summer, the plants in which it develops. If the dock plants are pulled up, roots and all, say, late in June, before they have gone to seed, and burned, a great many of the insects will be destroyed.

POTATO BLIGHT.—The experience of the Ohio station people in trying to fight the potato blight with copper remedies, the past season, has not altogether been satisfactory. Some rows were sprayed with the Bordeaux mixture, others with the ammoniacal solution of carbonate of copper, and some were left without treatment. The Bordeaux mixture was made by adding six pounds of copper sulphate and four pounds of lime to fifty gallons of water. The carbonate mixture was made by adding six ounces of copper carbonate to two quarts of ammonia and diluting with fifty gallons of water. Four applications, by spraying, were made during the season. The blight came and continued to increase in severity during July and the first half of August. Little difference in the degree of effect could be detected between the vines untreated and those to which the carbonate solution had been applied. The disappointment for me lies especially in the statement that even the rows treated with the Bordeaux mixture were attacked to a considerable extent. Still, there was a decided difference between them and the others. By the 5th of August the plants were practically all dead except in the Bordeaux mixture rows, which were yet green and growing. The difference, indeed, was very striking, and the Bordeaux mixture rows held out two weeks longer than the others. Consequently, there was a decided increase in yield in these rows. Yet further experiments will be necessary to determine whether the blight can be prevented entirely by the use of fungicides, and whether this can be done cheaply enough to have the increase of crop compensate for the outlay. It seems to me that one point is already well established, namely, that the application must be begun early, and before the blight has taken a firm hold on the plants. The whole treatment should be preventive rather than curative. A good knap-



MATILDA 4th's SON 20214.

sack sprayer can now be had for \$14, and I hope advantage will be taken of this by many growers, so the question can be definitely settled the coming season.

HYBRIDITY AND POLLENATION.

In my last article I used the terms "natural pollination" and "forced pollination," and forced, in this connection, might properly be termed unnatural.

Nearly all who will have interest enough to read these articles will know that perfect flowers, such as nearly all of our fruit trees have, have two sets of sexual organs, namely: the stamens capped with their anthers—sacs enclosing the pollen grains—which are the male element, and the pistils, capped by stigmas, which, combined with the ovary at the base of the pistils, are the female organs.

The act of pollination, then, is the plac-

ing of one or more grains of ripe pollen on the stigma of the pistil when it is stigmatic. The stigma of the pistil, when ready to receive the grains of pollen, becomes moist or sticky and remains so for a longer or shorter time, owing to the habit of the species. During this heat or moisture of the stigma it is said to be stigmatic, or in the stigmatic heat. It is there held by the sticky surface, the pollen grain or grains soon throwing out a slender tube which penetrates or grows down through the pistil until it reaches the ovary, with the future seeds in embryo, where it is absorbed; and there lays the foundation which may in due course of time develop into a new life, an individual life, differing in some points from all other lives that ever existed or ever will exist on this earth; that is, an individual or variety which will always remain the same so long as it has life.

We can multiply this variety by causing parts of it or portions cut from it to grow into millions of specimens of it, artificially, as by budding and grafting, but it always remains the same. The Bartlett pear is the Bartlett wherever we meet it, the different trees being only divided parts of the original tree, which had its start in one or more grains of pollen, nourished in the ovaries of the mother plant.

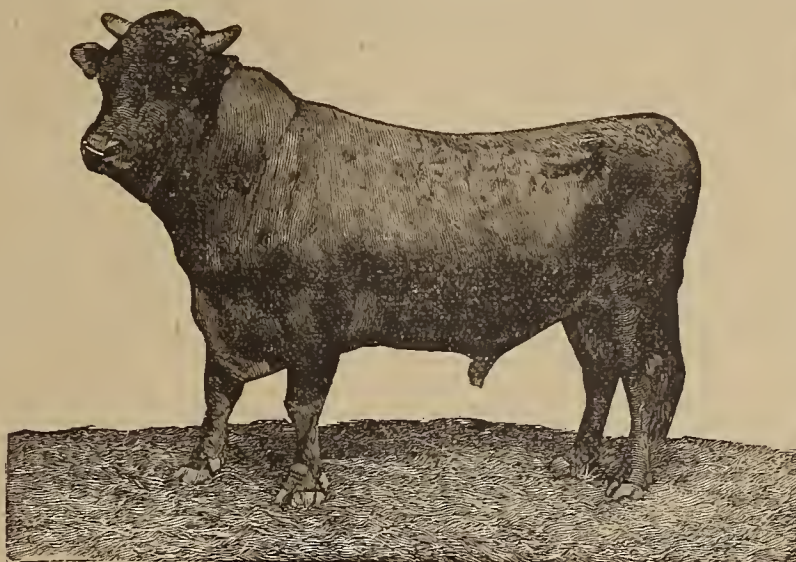
Such pollination may be called natural. We know but little of the delicate and intricate processes used by nature in effecting pollination; we never can know all, for they are too delicate and subtle. We do know, in various plants where the male and female flowers are on different plants widely separated from each other, that nature in some way brings the two sexual elements together when we might think it impossible. Again, we have cases where one would think it was not possible for a single flower to escape pollination, yet not one will be quickened. Yet there would be nothing mysterious, uncanny or supernatural about this, could we know all the facts. Electricity is a natural force, and where certain pollen cannot naturally reach certain stigmas, how simple the explanation of such a fact would be if we could prove that both were (to speak in electrical language) positive or negative and mutually repelled contact the one with the other. Then, all ways by which pollen can reach the stigma naturally, we may call natural pollination.

On the other hand, if we gather the pollen artificially, when ripe, and force it in contact with the viscid surface of the stigma, we may rightly term this forced pollination. To make the meaning more clear, some facts in the sexual breeding of animals will help, for the phenomena of generation in plants and animals run in parallel lines. We will take the salmon family of fishes. The distinct species of this family have lived in the one small stream or lake for ages, and bred freely, with no hybrids appearing between them; and so they might live and breed together for future ages of time, in their own natural way, with no hybrids. In the nature of things there could be none, naturally. Why? For scores of reasons, the most potent one being that the one species fears the other as the sheep fears the wolf, or the hare the dog. The spawn (eggs) of the one species is cast as remote from the other as the limits of the water

will allow, and generally at a somewhat different season of the year. But a still more potent reason is that it is not possible for the two species to have any sexual feelings or desire for each other. This seems to be the most powerful element which controls the natural purity of species.

Now, it has long been proven a fact that if we press the ripe eggs from one of these salmon or trout, and press the milt—the male element—from a male of a far removed and distinct species of the salmon family, and mingle the two together under the right conditions, they will be fertilized—will hatch and produce true and often fertile hybrids; or, in other words, a new species of fish.

In this we have about our only chance



IDA OF ST. LAMBERT'S BULL 19169.

of forced sexual breeding in animal life, and the results are equivalent to forced pollination in plants; or, in other words, the results are the same in the one case as in the other. A new species is brought into existence, and there is no doubt but that in the case of the fishes, several new species could be differentiated by selection from one hatch of eggs from the same male and female, by artificial selection during a few generations. The same would undoubtedly be true of the seeds of a pear grown by forced pollination with apple pollen, etc.

There are limits of forced pollination between fruit species, of course, but where that limit would be could we manipulate rightly, who knows? We know that there are limits to natural pollination, and very distinct ones. We know, absolutely, that there are species that will not, cannot, either naturally or by force, accept their own pollen, and there is but little doubt that there are species that will not and cannot be forced to accept any pollen but their own.

There are rules that have been determined concerning pollination in plants, and also many rules that have not been tried and determined, to keep experimenters busy until the end of time. Or, in other words, we have simply reached that stage that we do not know what we can do until we have tried; and when we have tried and failed, we only know that we may not have tried rightly. About the

oldest gardeners in the world, the Japanese and Chinese, have produced some wonderful fruits, many of them undoubtedly hybrids, and plants and flowers largely, certainly hybrids. The art they employed we know not, but probably they made no forced hybrids. Then what may we not expect from our artificial manipulations of pollen, or forced hybridity?

Petaluma, Cal.

D. B. WIER.

TWO JERSEYS.

The pair of high-bred bulls illustrated on this page are noble representatives of the best families of Jersey cattle in the world. They are the property of Ayer & McKinney, Philadelphia, Pa., and stand at the head of their Meridale herd, one of the largest and finest herds of Jerseys in the United States.

A NEW HIVE.

An English bee-keeper announces that he has discovered the long-looked-for, "universal" hive. But his hive, or its principle, is not new, and will not be universal; in fact, this hive, or one similar in construction, has been in use many years.

The new hive provides for side storing; indeed, this appears to be the new feature claimed by the inventor. The idea is old and not worth much. Frames for surplus honey are placed on each side of the brood-nest. The inventor says that the bees can work in these frames, or combs at the side, when it is too cold to ascend to the upper story. This shows that the inventor has not gone into the work-room of a colony of bees and there taken up his abode long enough to discover that it is always warmer over the brood-nest than at the sides; that if it be too cold for the bees to ascend to the upper story, it is colder to travel to the sides of the brood-chamber. In the living-room of bees, as in any room, the heat rises.

Further, side storing is not likely to be successful unless a queen-excluding board be used. The queen, working out from the brood-nest, will lay in the surplus combs unless she be restrained. It is said that the queen-excluding board does not hinder the bees very much. But it hinders some; there is no doubt about that. If a man, returning to his house, is obliged to crawl into a door just large enough for him to squeeze in, he would say that it hindered. That is exactly what a bee does when it passes through the bee spaces of the queen-excluder or the drone-trap. Again, it is contrary to established principles, contrary to bee law, to enlarge hives or colonies sideways. Many bee-keepers believe that if the present hive were twice as high and half as wide, it would be more in accordance with the natural plan of bees.

GEORGE APPLETON.

The Failure

Of the kidneys and liver to properly remove the lactic or uric acid from the system, results in

RHEUMATISM.

This acid accumulates in the fibrous tissues, particularly in the joints, and causes inflammation and the terrible pains and aches, which are more agonizing every time a movement is made.

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Rheumatism is to purify the blood. And to do this take the best blood purifier, Hood's Sarsaparilla. Hosts of friends testify to cures of rheumatism it has effected. Try it.

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necessary to mail one copy to each of our customers and applicants, number nearly half a million. The forms are electrotyped, and future editions are printed as required—making in all the largest number of Catalogues published by any Seed House in the world. With the perfect system necessary to handle so extensive a business, we can serve our customers more accurately and more promptly than can Seedsmen doing a smaller mail trade, where it is impossible to maintain a similar business, so completely organized. Dealing direct with the planters, we also know their requirements, and are enabled to supply the BEST SEEDS at as low prices as they can be produced and honestly handled.

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When you write, be sure to say you saw this advertisement in Farm and Fireside.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

A reader of the FARM AND FIRESIDE, residing in Tennessee, writes that he has a small garden, low and damp, which he wishes to make as profitable as possible. The query for him is what he should and could do at this season of the year to help along in the desired direction.

The very first thing to do is to make sure that drainage is perfect, or made perfect where in any way faulty. From my friend's query I infer that there is rather more moisture than desirable. This excess will disappear with perfect drainage. Every additional line of tile will help the productiveness of the garden, and we can well afford to have the drains two, three or even four times as near together as we would deem it necessary for ordinary farm operations. Ditches may now be dug where the ground is not frozen, or only a few inches deep on top. Even where real cold weather usually sets in by December, ditching can yet be continued for a good while. All that it is necessary to do is to have two furrows thrown together over every line of the intended ditch system. This covering of loose soil protects the solid soil underneath against freezing for some time, and is easily removed, so that the operation of ditching can proceed. But every ditch or part of a ditch should be finished, the tiles laid and covered before night. Neglect to do this must, in case of hard frost, result in much unnecessary additional labor and inconvenience.

Another thing that can be done in the fall to facilitate the spring's operations, is plowing and subsoiling. Have the land plowed in long, narrow beds, with deep, dead furrows for surface drainage. If the subsoil is naturally but little porous, or of clayey character, the subsoil plow should follow in the furrow made by the ordinary plow. Even at the North we have spells during winter almost every year, when such work can be done. This subsoiling is next to useless if not a positive damage, however, when done at a time that the subsoil is impregnated with water. The object is to open the subsoil and let water and air pass more freely through it. If stirred when wet this object is defeated, since the stirring forms a pasty mess, which, after drying out again, becomes more impervious to water than it was before.

Procuring and applying manures to the plowed surface is also seasonable work now. Fertilizing materials should not be spared if you want to make the most of your "small garden." Put on plenty of good compost and anything else in that line you can get, and while you then can wait for the opening of spring and active operations again, you should improve the opportunity and decide what things can be grown that are most wanted, or most profitable generally. If you plant for home use alone, you must, of course, have a little of everything; if for market, you must grow what the market demands and what appears to give the best returns. These are matters on which nobody afar off can give you directions or advice; each person must determine for himself according to his local conditions. Study the seed catalogues, make a judicious selection, send for your seeds early and be sure to have them on hand when wanted. In the meantime, also get the frames and the sashes that you will need in readiness, and, in short, make all preparations necessary for starting in fully equipped as soon as the season will permit.

SOIL FOR SWEET POTATOES.—J. H. H., of Mt. Morris, Illinois, has a piece of very rich, deep and loose soil, on which he desires to plant sweet potatoes next year. My experience is that on soil of this character the plants are bound to make a tremendous growth of vines, which will root all over the ground almost in spite of everything we can do. The tubers are long and slim and unmerchantable. It is safer to plant on soil of only medium fertility—soil neither very deep nor loose. I put the manure exclusively into the hills for this crop.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

THE CRANBERRY.

BY SAMUEL B. GREEN.

This plant is a native of northern Europe and America. Our American variety, which is the best, grows from Virginia to Canada, and certainly as far west as western Minnesota, but it seems to do best in the middle and northern states.

HABITS.

It grows naturally in low, wet, bog land. It is a perennial vine, with an attenuated stem, which may often be three feet long, with side branches. The leaves are small and oval in form, and the berry is of an agreeable, acid taste. It is very hardy and tenacious of life in every situation, and will root freely from layers or from cuttings strewn on the surface of the soil and slightly covered. It blossoms in May, the fruit ripens in September, and is greatly improved by cultivation.

VARIETIES.

There are two varieties commonly raised in this country. They are considered as one and the same thing, botanically speaking. The difference is said to have come by cultivation. The varieties are the bell and the cherry; so called from their shape resembling these objects.

FLOODING.

For the most successful cultivation, the land for cranberries must be so situated that it can be flooded at will.

1. To protect the fruit against early frosts.
2. To protect the plant against insects.
3. To protect the plant against winter frosts.
4. Because it is the nature of and beneficial to the cranberry to be covered with water a part of the year.

HOW DEEP TO FLOW.

This depends, necessarily, somewhat on the location of the bed. If there is but a small supply, flow the land until the water is one inch deep over the vines. But if the bed is subject to occasional extreme overflows, then it should be flooded at least two feet deep in winter; for if not, the vines get frozen into the ice, and then a sudden rise lifts the vines, and may bring ruin to them. The water should always be within five inches of the surface of the bed.

TIMES TO FLOW.

1. Whenever there is danger of the fruit being injured by frost, the vines may be flooded one inch.
2. Flow in the winter, and keep it on until the grass begins to get green, when it should be let off to allow the vines to start.
3. Keep it off the bed from May until after picking, unless it becomes very dry or the insects are troublesome, when it may be flooded for a day at a time.

MAKING THE BEDS.

It will not pay to expend much money in preparing a bed, unless the flowage can be controlled, as the risks from frosts and insects are too numerous. Having a good peat or muck bog, two or more feet deep, and having control of the flowage, no matter what vegetation is on the land, it will pay to reclaim it for cranberries.

The vegetable life on the land, whether it consists of bushes or trees, must be cleaned off, and a good surface formed, free from many roots. This may be done by taking the crust off with spades as deep as necessary, or if possible, the land may be plowed and got into shape as for any garden crop. It will generally be found best, if plowing is the means used, to let the land lie fallow one season, killing out the bushes and weeds as much as possible. The time spent in getting the beds into good order before planting, is well spent, for in this work success is dependent upon a good start, and if the soil is well prepared at first, the subsequent lessened expense in cleaning more than compensates for any present expense.

After preparing the land, by killing out all vegetable life, the beds may be made up. These should be small, and have an even grade, running to a ditch on each side, so that the water can be drawn off quickly. Never allow any hollows on the beds. The beds should now be covered four inches deep with clean sand, which should be taken from a deep pit, if

possible, so that it will have no weed seeds in it.

PLANTING THE BEDS.

This may be done in two ways:

1. The vines are pulled from some neighboring beds, without regard to their having roots. They are then run through a hay-cutter and cut into pieces three inches long. The sand should be flooded and then harrowed before planting. The pieces of vines are then sown broadcast over the land and rolled in. After this, the water is let on and the sand kept very moist until the plants have made root. Plants grow as vigorously when planted in this manner as in any other, but the objection is the difficulty of after-cultivation.
2. The sand is wet and marked off into rows one foot apart, and the plants set in the rows about six inches apart. This is done by taking a vine, which may be three feet long, and pressing it down at intervals of six inches, with a blunt stick. It matters not if the vines do not have any roots on them, for they will soon form roots in the moist sand.

If not convenient to obtain plants from cultivated beds, they may be safely taken from productive wild bogs; but wild plants vary much in productiveness. Plants from good-bearing bogs may be obtained from any of the reliable nurserymen in the middle and eastern states.

AFTER-CULTIVATION.

This consists of keeping the beds free from weeds by the hoe, at first, and later, when the vines have become thick, by hand weeding.

HARVESTING.

This is best done by hand picking. The bed should be laid off into strips, with strings, and each picker made to pick one strip clean before being given another. Sometimes, when greatly hurried, the berries may be harvested by means of the rake, and then cleaned by inclined board and brush. But this latter method is shiftless, and not to be generally used. After the picking is all done, no matter what method has been employed, the bed should be flooded, and the wind will flow the dropped berries to the land.

The berries should be carefully sorted, if necessary, to have the grade uniform, and to remove poor ones. They should then be packed in clean, one-hundred-quart barrels for marketing.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Eggs of Insect Sent for Name—Measuring Rainfall.—W. S. S., Galesburg, Mo., writes: "I send some eggs, found on my grape vine, to find out if they are something new or not.—Please explain the signal service manner of measuring rainfall. I had an oil-barrel standing in the yard during a rain. When I looked, there were five inches of water in it. Is that five-inch rainfall?"

REPLY:—The eggs received are those of the katydid, that is so numerous in your section. They are almost harmless, for while they eat some vegetable matter, they also eat some insects, and the damage from them amounts to almost nothing.—Yes, probably that is what the rainfall was where the barrel set, but it would not be the correct amount of rainfall unless it was in the open field, free from contact or influence of buildings and set perfectly level. The signal service uses a rain gauge that has ten times as much surface at the spreading, funnel-shaped mouth, as in the body or cylinder, so that in measuring the rainfall, only one tenth of what is measured in the gauge or cylinder is the actual rainfall.

Peach and Quince Queries.—J. S. A., Carlisle, Ind., writes: "1. I want to plant four hundred peach trees, for market mainly. What four varieties would you suggest? 2. In good corn soil, would it be advisable to use fertilizer for say two years after planting? 3. What distance apart should the trees be set? 4. I want to set out about two hundred quince trees. At what time will quince trees come into bearing? 5. Is there any advantage in salting quince trees? 6. Is the apple quince as good for market as any other?"

REPLY:—1. Would recommend Crawford's Early, Crawford's Late, Old Mixon Free and Stump. 2. Probably it would not be absolutely necessary, but I should add enough potash and phosphoric acid to make sure these foods are in excess in the soil, for I believe that a lack of these two elements in the soil is more apt to be conducive to weakness and disease than a lack of nitrogen; and then, further, the cost is comparatively little. You might use two hundred pounds of ground Thomas slag to supply the phosphoric acid, and one hundred

pounds of high-grade muriate of potash for the potash (per acre). If it is found that the foliage is not of a dark, green, healthy color and the trees are not diseased, it would show a lack of nitrogen in the soil. This might be supplied by plowing in a crop of clover or peas. These latter, and similar crops called legumes, have the power of taking nitrogen from the air when they have plenty of phosphoric acid and potash at hand, and if plowed in, form a cheap source of nitrogen. Or from one to two pounds of nitrate of soda may be applied to each of the trees, according to their size, some time in May or June. 3. Set 10x15 or 12½x12½ feet apart, if it is intended that they shall be loaded in; and this is advisable. 4. Two-year-old quince bushes should commence to bear in three years in good soil. 5. I do not know whether there would be or not. Salt acts on the soil to make it firm, and also starts some important chemical action. If the soil is not already too heavy and compact, a little, say twenty bushels, would do no harm, and might be beneficial, but you will get your best results, probably, from using the fertilizers that I recommended for the peach. Mineral manures are good for fruit trees. 6. The orange (or apple quince is, I think, the most profitable to grow for market.

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100 pages, 40 illustrations, 20 short chapters on the kitchen, chimneys, cisterns, foundation, brickwork, mortar, cellar, heating, ventilation, the roof, and many items, of interest to builders.

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Contains the most practical descriptions of varieties—
The best instructions to planters—The best recipes
for cooking Vegetables—
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EXTRACTS FROM CORRESPONDENCE.

FROM WEST VIRGINIA.—Preston is a large county and is as wealthy as any other in the state. We have good society, good, free school privileges and good churches. We are blessed with plenty of good water. The soil is medium, and we can grow most of the grains. Our growing season is a little short, and we have plenty of winter. It is a good place for winter-loving people. We have rather poor markets for our produce. F. N. W.
Egton, W. Va.

FROM KENTUCKY.—Boone county is situated on the Ohio river, about one third of the way from Cincinnati, Ohio, to Louisville, Ky. It is generally hilly, with low bottoms along the river from one to three miles wide. Land ranges in price from \$25 to \$100 per acre, according to location and improvements. The principal crop is tobacco, followed by corn, wheat, oats and Irish potatoes. Some fruit is also raised, but not very much. S. R.
Rabbit Hash, Ky.

FROM MICHIGAN.—The past season has been a very favorable one for farmers in this locality. Although the water fall during the preceding year was so light that the soil was not dampened to its depths, yet so opportune have been the rains that all our crops were excellent; while in the great "fruit belt" fruit has been scarce, orchards here have been loaded, and small fruits of all kinds abundant. Winter wheat looks well. Prices for farm and garden produce are better than for many years past. H. C. P.
Big Rapids, Mich.

FROM OHIO.—Madison county is one of the best agricultural counties in the state. Corn was a good crop last year, and it is selling for 53 cents a bushel. We are selling to our adjoining counties. Wheat was an average crop; oats and potatoes were a failure. London, our county-seat, is one of the largest live-stock shipping towns in Ohio. One week during December there were shipped over the Big Four and Pau Handle roads seventy-five car-loads of cattle and hogs to the eastern markets. In the shipment were forty cars of fine export cattle, weighing from 1,600 to 2,030 pounds each. What town in the state can beat this? J. G. L.
London, Ohio.

FROM WASHINGTON.—Oreos Island is famous for its fruits. The apple, pear, cherry, prune and plum never fail, while the quince, peach, apricot and some varieties of grapes do fairly well, and all the small fruits grow to perfection. We have three trans-continental railroads within twenty-five miles of us, and will have another within a year. Besides our local markets we have Eastern Washington, Idaho and Montana on the east and British Columbia and Alaska north of us. The island abounds in streams, and good water can be obtained by digging ten to twenty feet. We have no hot summers nor cold winters. We have daily steamer communication with all the Sound towns. The island has a population of about 500. We have good schools and two churches. A. K. J.
East Sound, San Juan county, Wash.

FROM OREGON.—This is the best country that I have ever lived in to make money, either at farming, mercantile business or as a day laborer. Land near the business places is as high or higher than in the eastern states. There is plenty of government land for those that may want homes, but I would not advise any one with a good home to sell and come West into a heavily timbered country. Pears, apples, plums, prunes, cherries and all the berries do well here. Real estate is booming here, now. They are working on a railroad and expect to finish it in two years; it will connect us by rail with the East, North and South. Vessels, steam and sail, are coming and going all the time on the bay. We have no potato or chinch bugs. Fruits are all free from pests. Eggs are 45 cents per dozen; butter, 35 cents per pound; apples, 75 cents to \$1 per bushel; pears, \$1 per bushel; Irish potatoes 1½ cents a pound; wheat is 2 cents a pound. W. F. C.
Marshfield, Oregon.

FROM MICHIGAN.—There are many worse localities than northern Michigan for farming. Another summer has passed and this part of the state has been blessed with a bountiful harvest and good prices for every farm product. There are thousands of acres here that can be bought for little money and would make beautiful farms if they were cultivated intelligently. There are all kinds of land here—level, rolling and hilly. It is as healthy as any part of Michigan. The winters have been mild of late. Cattle find their own living from April till Christmas, and pasture is unlimited. The land is a light, sandy soil, and can be made to produce anything that will grow in this latitude. I have resided here for the past seven years. The land is timbered with pine, oak, poplar and black cherry, and there are many acres that have no timber at all. There are also swamp lands along the streams that are black muck and very fertile, but hard to clear. I would like to see this part of Michigan settled up. There are railroads all around, and a lake port fifteen miles distant. Now is the time to get a good home cheap. F. A. S.
Five Lake, Mich.

FROM COLORADO.—Our potato crop was about half a yield last season, owing to the drouth, and prices are one third higher than they have been for several years. The other crops were light. I refer only to my section of the country, which is in the foothills of the Rocky mountains, about 7,500 feet altitude. We depend on rain here for moisture, while lower down they have to irrigate. Our climate is healthy—cool in summer—in fact, too cool. We cannot raise any very tender vegetables or fruit. The winters are not extremely cold, but are quite long. Our soil in the gulches is rich, black loam, while the hillsides and ridges are clay loam. Potatoes are our main crop for market. We raise from three to five tons per acre, and this year will get 1½ cents per pound. All other root crops do well here; also all kinds of grain. We have good spring water. Stock will live all winter on the range on the mountains. There is an abundance of timber for fuel and improvements. There are a few government claims that can be taken which would make good homes, handy to school and post-office. D. A. L.
Lamb, Jefferson county, Colorado.

FROM ARIZONA.—I will write you a letter from the southern part of Arizona, where I have lived for the past five years. If the maker of this universe sought to prepare a spot where beauty should be the forerunner of riches, certainly the Salt River valley is that spot. Here is an unending, ever-constant and never-tiring panorama of all that arouses admiration. There is no other valley which can compare with the Salt River valley. From the crests of the surrounding mountains pour outstreams of the purest waters, constantly fed by the melting snows, and as these rivulets widen out from their source they help feed the Salt river, which flows on down past the towns of Tempe and Phoenix till it empties itself into the Gulf of California. The crevices of the hasaltic formation of rocks on mountain surface receive the residue of the waters not taken by the mountain streams, and this sweeps through till it reaches the desert, where it disappears into the ground, making it so soft and mellow that there is no trouble whatever in working it. This lovely valley will be more thickly settled in the near future. Eastern farmers coming here in the fall of the year will meet with a surprise in all kinds of fruits or grain. No better stock can be shown in the south-west than that raised right here in the Salt River valley. The crops of alfalfa taken from the fields is something surprising. Whatever crops farmers raise they are sure to be fully repaid for the amount of labor expended on the land. This country has never had a crop failure. We have perfect weather from the first of September up till the last day of May, when the weather begins to get hot. There are a few days in the summer when the nights get so hot that one cannot sleep very well. But the wealthy residents can go up into the mountains. It is about two days ride to the foot of the mountains, whose sides are covered with the stately pine and white ash. There they can fix their camps and hunt wild deer, bears and wild turkey. The day is not far distant when we shall have a north and south railroad to pierce this valley, and then we shall have markets for everything that we raise. We have a branch railroad connected with the Southern Pacific, called the Maricopa and Phoenix railroad, which runs through Tempe and Phoenix. T. H. M.
Tempe, Arizona.



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THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammoncton, New Jersey.

FOOD AND GROWTH.

The duckling will eat twice as much food as the chick, but it will also weigh more than twice as much in two months. It is not the amount of food eaten that regulates the expense, but the ratio of gain in proportion to the amount fed. It matters not how much is consumed, provided you have a corresponding growth and increase of weight. Feed the ducklings heavily and force them.

CROWDING THE MARKET.

It is customary to push all the surplus stock to market in the fall of the year, which reduces prices. In January the prices will begin to advance. It will not pay you to ship at a time when the markets are full. If you have more fowls than you wish to keep, the best way to dispose of them is to use them on your table.

SWELLED HEADS.

If you allow a draught of air to flow over your fowls at night, the probability will be that you will find their heads and eyes swollen in the morning. The first thing to do is to remove the cause by stopping up the cracks or the ventilator-hole at the top of the poultry-house. The best remedy is to anoint the head and eyes with a few drops of a mixture of one part of spirits turpentine and four parts of sweet oil.

SCARCE EGGS.

Eggs have been very scarce this fall and winter, and prices at no time have been low in the large cities. In fact, there is nothing produced on the farm that brings a higher price than eggs, and we see no reason why a flock of hens should not pay well. In the winter season some farmers have but little cash other than the sum received from eggs; and if they will provide warm quarters and keep the hens comfortable, the supply will be larger, with but little additional cost for production.

LARGE AND DOUBLE-YELKED EGGS.

It is seldom that a double-yelked egg will hatch, though instances have been known in which such eggs have produced chicks. When double-yelked eggs are found, it is to be regretted, as they invariably indicate that the hens are out of condition—too fat. A hen in good laying condition will never produce an egg other than of the normal size peculiar to her breed, and if fat, she is entirely unfitted for laying. If a fat hen is killed she will be found full of eggs, so to speak, but they will be noticed to be of all sizes, and the poultryman will be amazed over the fact that she did not lay; but examination will show that obstructions of fat were the cause, and the hen is then more profitable dead than when alive.

MATING THE BREEDING STOCK.

Unless you desire to hatch chicks, the males can be kept away from the hens. By so doing, a larger number of hens can be kept together, instead of a male and ten hens, for if two males are put in the same pen, they will probably quarrel and fight, and be rendered useless. When eggs are desired for incubation, make up a breeding-pen of ten or twelve of the best hens in the flock; select from those known to be the layers and which have been free from disease of any kind; with them put a vigorous cockerel, not under eleven months old and of a preferred breed, and the result will be satisfactory.

Do not attempt to raise chicks by using eggs for incubation from the egg-basket, and which are laid by hens that you are not sure were the ones that deposited the eggs in the nest; but make up a breeding-pen, consisting of selected hens, with a selected male with them, and you will then know the kind of chicks to expect, and also know something of their future prospects; but unless this is done, all your efforts will be like working in the dark.

Be ready for Christmas. The New Parlor Game beats everything for men, women and children. The Elastic Tip Co., Boston, Mass., will mail you the Game for 75 cts., if your dealer has not got it.

LOW COST POULTRY-HOUSES.

We have endeavored to give a great many designs of poultry-houses, and in this issue give two by way of comparison. It is not possible to present a design that would be acceptable to all; hence each reader must compare the whole, and select the one most suitable for his purpose, considering the cost.

Fig. 4 shows a house in which the roof and sides are combined. It may be 16 feet square, 9 feet at the peak, with a board at the bottom 1 foot high; or it may be of any size desired. The cost for material is about \$15, the floor being of earth. It is not so convenient for one entering it as is the house shown at Fig. 5; but this house gives more room on the ground, at less cost. Windows should be at both ends, and the roosts may be short, so as not to

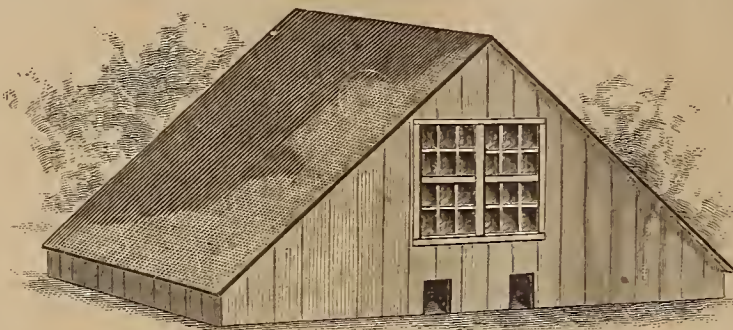


FIG. 4.—POULTRY-HOUSE.

interfere with ingress and egress of the attendant.

Fig. 5 shows a double house. This house is 10x16 feet, divided into two apartments, each 8x10 feet, and will cost about \$15. Each apartment will accommodate about ten or twelve fowls, and one ventilator (A) will answer for both. There are two entrances to and from the interior, one at each end (B) and a wire or lath partition, with a door in the partition, separates the two flocks. This house, like the other, gives plenty of room on the ground, and is more convenient in some respects; but both are good and cheap.

SOMETHING ABOUT MOULTING.

Those who witness the moulting of the hens do not, perhaps, consider how important the operation is to the feathered tribe in general. It is the casting away of the old covering, the putting on of new clothes, so to speak; but the process is a gradual one, requiring three months for its completion. The majority of persons have no patience with a moulting hen. They think she ought to lay when she is moulting, but, if they will reflect a little, they will conclude that nature is economical in her workings, and does not devote upon her creatures the fulfillment of more than one task at a time. Now, a hen cannot shed her feathers and lay at the same time. It is as much as she can do to pass through the period of moulting safely, for, should she catch cold or become sick from any cause, her system will be too much out of order to enable her to arrive at good health again.

Although the hen becomes, as a rule, rather fat while moulting, this is due to the fact that when her food is assimilated, the feathers require for manufacture nearly all of the lime, phosphoric acid and nitrogen that is contained in the

Then, again, during the process of feather-making, there are other minerals that are urgently demanded by the system, such as iron and sulphur. When the hens are moulting, give them a generous supply of bone meal, charcoal, meat and vegetables; tincture of iron in the drinking water, and a few pinches of red pepper occasionally, makes a tonic for them. The hens that moult the earliest always begin to lay the soonest, and, therefore, it is best not to dispose of those that moult early. When once a hen is through moulting, she has a good start as a layer, and has no further work to do till the succeeding fall but lay, and, if well fed, will do well in the winter, especially if the quarters are warm. If early pullets are well grown, the late-moulting hens may be sent to market, and they will retain laying till

warm weather in the spring, and late pullets will not lay in winter at all, unless they have matured quickly.

IMPROVING WITH EMBDEN GEES.

The common goose is very hardy, lives to a good age, is singularly free from disease, and requires but little attention from the owner. They are much hardier than any of the pure-bred geese, but lack size. It is singular that the male and female of the pure breeds are alike in color, while the male and female of the common kinds are never alike, the gander being usually lighter than the female.

Weight is very important in the goose when the carcass is to be marketed, and while we advise our friends to use the common kinds, yet it would be quite an improvement to get a gander of the Embden variety, in order to grade up the stock some. Even with one gander the process will be slow, but every cross-bred goose will be worth two of the common kind. Embden geese will often weigh thirty pounds each or more, and as they are entirely white in plumage, the feathers will sell more readily. Once the breeding stock has been improved and the number to be retained decided upon, only the young geese need be sold, as the old ones are not easily marketed at a profit. Old geese are better breeders than the young ones, and will raise a brood of goslings every year.

THE COST OF PURE BREEDS.

What is a trio of fowls worth? is often asked by some anxious inquirer. In order to answer such a question, we will say that everything depends upon what they are required for. There is a tendency to pay the highest prices possible for what are termed "exhibition fowls." As high as \$100 has been paid for cockerels that are capable of "sweeping" the special prizes and carrying off the honors, but such cockerels, outside of the show-room, are not the best for breeding, except in rare cases. A person may pay a high price for a trio, and still not be able to

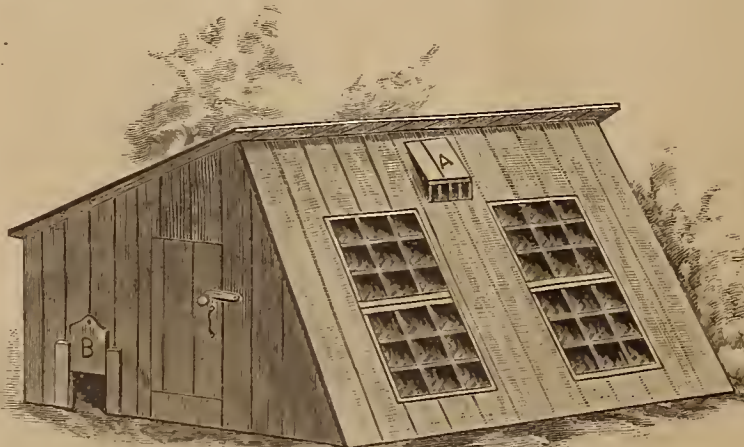


FIG. 5.—POULTRY-HOUSE.

food, but require very little carbon. The hen may, therefore, grow fat and yet be weak, for she may be richly supplied with certain elements of which she always has an excess, while being very deficient in other elements that are absolutely requisite for the purpose of moulting. As the hen has now to supply her own bodily wants, as well as to grow feathers, she has a great drain on her system, and to neglect her for a single day makes it very precarious for her

take a prize, and it is doubtful if any breeder will sell his best, even when the prices asked are readily paid, for they usually send something else instead, not that they do not send exhibition fowls, but do not care to send their best. If a trio is desired for breeding purposes, it can be purchased at a less price than that asked for fowls used for the shows. Although a trio may not score very highly, yet, if properly mated for breeding, will produce, very often, better progeny than

the best exhibition stock that can be procured. Everything depends upon the mating, and to properly mate fowls requires judgment. It is usually done by endeavoring to overcome a defect in the female by excellence in that respect on the part of the male, and vice versa, but, in all cases, the stock should have as few defects as possible. Some breeds are hard to mate, as the colors of the males and females are so dissimilar. Thus, in order to breed Dark Brahmas, the black-breasted cocks are mated with dark hens in order to produce black-breasted cockerels, while the penciled or mottled-breasted cocks are used for producing nicely-penciled pullets. The Plymouth Rocks are mated in order to produce dark cockerels and light pullets, as the tendency is for the cocks to come to maturity too light in color and the pullets too dark. Very often the pullets are black from improper mating. So, to ask what a trio is worth, depends not only upon the purposes for which they are required, but also upon the breed. Some breeds are harder to raise than others, such as the Polish, while others are not so numerous, as the Wyandottes. The price is also regulated by the season and the age of the trio.

MERITS OF THE BREEDS.

There is not a breed known to-day that has not been written up as the best that has appeared, and there is not a breed that is so friendless but that a champion in its favor can be found. Every season we are astonished at the performances of some new candidate for public favor, whose merits so far outstrip all other breeds that those who are unaccustomed to such descriptions believe that all the breeds must take a back position and yield the whole poultry field to the newcomer.

But it is the same story, over and over again. The new breed steps forth, commands admiration, is given the highest place, but soon drops from the head, goes down near the foot, and another aspirant steps in to be king for a short term, as the new breeds are faithfully tested and given an opportunity to establish all that may be claimed for them. The fact is, however, that, while all new breeds that appear really possess some advantages, their admirers are not so free to give their defects, leaving the farmers to learn that, and as no breed is perfect and none free from some drawback, it will yet be a long time before the "general purpose fowl" is discovered and given the preference over all others.

EGGS FOR HATCHING.

In selecting eggs for hatching purposes, see that they are uniform. Very large eggs, that "bulge" out at the larger part, and which are disproportionate in width to length, seldom hatch, as hens that lay such eggs are usually in an overfat condition, and we may here mention that eggs from very fat hens are nearly always large or exceedingly small. The eggs for incubation should be of normal size, smooth, free from excrescences or inequalities of shell and well-proportioned. But we must go beyond the eggs and know from what kind of hens they came. All breeding stock should be in perfect health and in full vigor, the male to be active, and the females industrious in their search for food.

The breed used should be one that possesses some meritorious characteristic, such as good laying, market quality, size, hardness or adaptability to the climate.

No eggs should be used for hatching except those that have been selected for the purpose. To take a number from the basket, without selecting them, is to incur the risk of securing no chicks, while extra care may result in a good hatch.

BONES AND BONE MEAL.

For laying hens, bones that have been coarsely ground are excellent, as they are digested and used as food. They provide the necessary phosphates and also lime for the shells to a certain extent; they also contain a proportion of nitrogen. Bones, when sharp, also serve as grit, for masticating the food in the gizzard, thus rendering a service as well as providing the materials for the production of eggs. For very small chicks, bone meal is better, and the finer the bone meal the easier it is digested by the chicks. Some persons buy the ground bone, sift it, use the coarse part for hens and the finer parts

for chicks. Fresh bones are much better than bones that are dry, as they contain a certain amount of meat and gelatine. Bones are very cheap, considering their value, as the hens will not eat a very large quantity at one time, but if fresh bones are broken or pounded to sizes that can easily be swallowed, the hens will consider them quite a treat and consume a large quantity. They can be broken much more readily when heated in an oven.

NEST-BOX TO PREVENT EGG EATING.

Mr. Luther Robbins, sends a plan of a nest-box which, though simple, is novel in some respects. Mr. Robbins, in describing it, says:

"My hens prefer it to the open nests,



FIG. 1.—NEST-BOXES.

and as the inside of the nest is dark (which the hens prefer), they are not liable to eat the eggs in the nests.

"Fig. 1 shows the exterior of the nest-box, which is 4 feet and 5 inches long and 22 inches wide. It contains four nests, each nest being 1 foot square, making 4 feet, the extra five inches being for the ends and partitions. In Fig. 1 the door to the passage is shown at B, while A A designate hinges, the top being raised when desired to collect the eggs.

"Fig. 2 shows the plan of the floor, there being a walkway, 7 inches wide, the whole length, which may be open at one or both ends, as preferred.

"Fig. 3 is a plan of the entrances to the nests and also of the partition between the walkway and the nests. The holes are ten inches in diameter, the bottoms of the holes being two inches above the floor of the nests.

"The door, or entrance to the box, is 24 inches high, but may be lower if desired; and the legs under the box may be as short or long as preferred.

The inside may be lined with tarred paper, or made in any manner suitable. Slats or wire netting can be stretched around the legs, thus providing a place for sitters or for breaking up sitters. This nest can also be made without legs; or it may be placed outside of the poultry-house, provided an opening be made in the poultry-house to correspond with B, Fig. 1, the opening of the house and that of the box being brought together."

There is more catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease, and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly upon the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials.

Address F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75 cents.

MR. PETROFF, who had charge of the census of Alaska, estimates the population of the territory at from 35,000 to 38,000. Of this number one seventh are white.

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We are getting up a club of subscriptions for the best of all the weekly farm papers, *The Rural New-Yorker*. Its regular price is \$2.00 a year, and it is well worth it. Its price to clubs is \$1.50 for each subscriber in the club. We will take your subscription at \$1.50 and include a year's subscription to *FARM AND FIRESIDE* without extra charge. You can get a specimen copy of *The Rural New-Yorker* free by addressing, Publishers of *The Rural New-Yorker*, New York City.

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15 Pkts. WORLDS FAIR COLLECTION 30 Cts. Rare and Beautiful FLOWER SEEDS

I grow all my own seeds and warrant them fresh and true. The Worlds Fair collection contains the following varieties: Mill's New Rose Aster (mixed) no aster can equal this for rich and beautiful colors; New Rose Bud Balsam (mixed) just out, immense size double as a rose; White Fragrant Candytuft, excellent for borders; New Butterfly Larkspur (mixed) nest colors ever so colored; ygmæ Marigold, a rare curiosity; Mill's Defiance Pansy (mixed) mammoth size, rich and velvety (sells at 25 cents per package); Sweet Mignonette, very fragrant; Petunias (supermixed) simply elegant; Mill's Surprise Phlox (mixed) really a surprise and curiosity; Snow Drift Poppy, double choice white; Poppy (supermixed) finest and most curious varieties in the world; Worlds Fair Sweet Peas (mixed), no other kind can equal these for beauty; Pomona Zinnia (mixed), largest and finest in the world; Calliopis (new mixed), very showy; Sweet Alyssum, very rare; 15 full size packages with directions for culture 30cts; 4 collections \$1; nothing can equal this collection. Send in your order at once and be pleasantly surprised. Illustrated Catalogue full of rare bargains, FREE with every order. 1 Pkt. of my wonderful Tree Carnations Free with each order, if you send address of 3 friends who buy seeds. F. B. MILLS, Rose Hill, Onondago Co., NEW YORK.

CORRESPONDENCE.

ROSE OR SINGLE COMBS.—The claim by Mr. Jacobs that the rose comb is as liable to the effects of frost as the single comb, was both a surprise and novelty to us. We had supposed that this question was universally settled. Our own experience of ten or twelve years has established a conviction which we shall still cling to, even in the face of this over-awing authority, with the tenacity of death to the traditional negro. The position taken by our friend Jacobs is, in fact, simply absurd. According to this process of reasoning, the fat man must suffer untold misery, in comparison with the lean man, when the mercury drops. The truth of which, as any reasonable man knows, is just the contrary of this. And so the rose comb, on account of being broad and chunky, permits of a comparatively free circulation of blood, thus enabling it to stand a much lower degree of temperature than the thin, transparent single comb. To assume otherwise indicates — We hope that Mr. Jacobs will hereafter refrain from so recklessly endangering his irreproachable reputation. W. M. BARNUM.

Indiana.
[We are much obliged to Mr. Barnum for upholding what he believes to be correct. Facts show that but few rose combs fail to preserve their points (tips) during the winter, and while

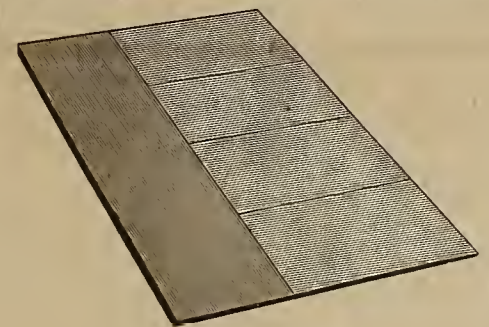


FIG. 2.—NEST-BOXES.

we admit that a large comb contains more blood, yet, as it is more exposed by reason of greater surface, more cold must be counteracted; while it is also a fact that it requires less effort of the heart to force the blood and warmth to a small comb than to a larger. The fine points of a rose comb present large surfaces to the frost, and as they are also thin, they are almost invariably cut off by the frost.—ED.]

INQUIRIES.

Turkeys Picking Themselves.—F. N., Center, Neb., writes: "What is the disease and cure for my turkeys? They begin picking the knee-joint, and pick until they have great holes in their legs."

REPLY:—It may be body lice, or it may be the result of some parasite or humor. Anoint with a mixture of four teaspoonfuls of lard, one of wood tar and ten drops of carbolic acid.

Drooping Hens.—C. G., Parma, Mich., writes: "My hens get sick, droop for a month or more, have good appetites, red combs, but finally die."

REPLY:—It may result from the large, gray body lice on the skin of the heads and necks. If leg weakness accompanies the difficulty, the cause is that the male is too large. Remove hens from the male, anoint heads with



FIG. 3.—NEST-BOXES.

melted lard, and add five drops of tincture of nux vomica to each quart of drinking water, allowing no other water to drink.

Breeds and Crosses.—H. O. L., Pollock, Mo., writes: "1. Would you recommend a cross of Silver-Penciled Hamhugh cock with Plymouth Rock hen? 2. What age should each be before one should pen them? 3. What breed gives the best results for eggs, and what breed is best for market fowl by weight? 4. What kind of fence would you select for a good, cheap and economical poultry fence, and what height?"

REPLY:—1. We do not believe the cross would prove as well as a cross of Houdan and Plymouth Rock, the Hamhugh being rather tender in winter. 2. From ten months to two years for the male, and from seven months and upwards, for the female. 3. Probably the Leghorns for eggs, and the Brahmas, Plymouth

Rocks and Langshans for large market fowls. 4. No. 18 wire, six feet high, makes a cheap and serviceable fence.

A Batch of Questions.—S. L. G., Hummelstown, Pa., writes: "What causes chickens to get such scabby legs when they are healthy otherwise?—How should a poultry-house be ventilated in winter?—What kind of a floor should a poultry-house have?—How should ducks be kept for profit?"

REPLY:—It is due to a minute parasite, which gradually deposits the scaly or rough substance on the legs. Anoint once a week with lard oil or any kind of grease.—As no system of ventilation allows pure air without loss of warmth, it is sufficient in winter to leave the door and windows open during the day and close the door snugly at night.—A board floor is better than any other, if rats are kept from under it.—There is no difference in the keeping of ducks and chickens, other than to allow them more bulky and animal food, and to keep their quarters well littered with cut straw. Use only the large breeds.

PORTER BLANCHARD'S SONS Co., manufacturers and dealers in everything in the dairy line, were burned out recently at their works in Concord, N. H. They are now located at Nassau, N. H., and are doing business on a larger scale than ever.

BLUFFTON, MO., Nov. 10, 1890.

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Our Fireside.

A BOY'S MOTHER.

My mother she's so good to me;
Ef I was good as I could be,
I couldn't be as good; no sir!
Can't any boy be good as her!

She loves me when I'm glad er mad;
She loves me when I'm good er bad;
An' what's a funniest thing, she says
She loves me when she punishes.

I don't like her to punish me;
That don't hurt, but it hurts to see
Her cryin'; nen I cry; an' nen
We both cry, an' be good again.

She loves me when she cuts and sews
My little cloak and Sunday clothes;
An' when my pa comes home to tea,
She loves him 'most as much as me.

She laughs and tells him all I said,
An' grabs me up an' pats my head;
An' I hug her, an' hug my pa.
An' love him purt' nigh tanch as ma.

—J. Whitcomb Riley, in the Century.

THE NUGGET OF GRUB-STAKE GULCH.

BY JAMES OTIS.

CHAPTER I. THE ARRIVAL.

MR. JOSEPH GRANT, better known as Conestoga Joe, sat on the veranda, as it was termed by courtesy, of the "Palace billiard saloon," whereof he was the sole proprietor, looking down the single street of the mining camp as if perfectly satisfied with all his surroundings. He could congratulate himself on having been the first to bring Grub-Stake Gulch such refining influences as might be found in the "Palace," by those who were in a healthy financial condition, and he it was who had changed the name of the camp to "St. Julian," an enterprise of which he was very proud. This appellation was not bestowed upon the gulch because of any idea of doing honor to Cæsar, but, as Mr. Grant frequently said, "It looked so fine on a claret bottle that it was bound to strike people as bein' way up for a town."

On this particular day the proprietor of the "Palace" was idle because the miners were all at work, and the drones of the camp, having long since relapsed into a state of chronic impecuniosity, were not of sufficient importance to warrant his spending any time with them. He had but just settled himself down for pleasant contemplation of his many services to the public, when his reverie was rudely interrupted by the arrival of a habitue of the "Palace," known to the citizens of St. Julian as Big Bill.

This gentleman, in the regulation garb of flannel shirt, top boots, into which were negligently tucked a portion of the blue jean trousers, with a revolver drooping carelessly over his left hip, sauntered slowly down the street until, having arrived opposite the "Palace," he stopped in front of the worthy proprietor, who asked, in a friendly tone:

"What's up now, Bill? Found another true vein and want to sell the claim?"

"See here, Joe," and the new-comer spoke impatiently, "don't you think we've had about enough of that joke?"

"What do you mean?"

"You know, an' so do I. The boys want to make out that I salted the claim before I sold it to Seth, but I say it was a fair deal."

"Looks kinder queer," Mr. Grant said, musingly. "He found plenty of color the first day, an' since then can't get enough to put in his eye."

"That don't prove nothin'. I sold to him on the square, an' if I'd know'd it was goin' to peter out like it did, the trade never'd been made."

"Five hundred was a good pile to pay for a hole in the ground, an' you was mighty lucky to get shut of it at that price. It's none of my business, though. What'er you loafin' for?"

"Come up to tell the news, an' kinder 'lowed I might wasb the dust out my throat."

Although he never admitted the fact, Mr. Grant was quite a gossip, and the idea of learning something which could be given to his customers as a relish to the liquors he dispensed under the name of "pure liquors," caused him to be suddenly seized with a spasm of generosity.

"Come inside," he said, curtly, and then added, after having placed a black bottle and two not remarkably clean glasses on the bar, "What's up in pertic'lar?"

"Seth Hammond has had his sister shipped on here from the East," Bill said, with an air of suppressed excitement, as he wiped his mouth with the sleeve of his shirt, after having swallowed the contents of his glass.

"W-h-a-!"

"It's a fact; she's bound to be landed in this 'ere bloomin' town between now an' to-morrow

night." And as if too much pre-occupied with the important news to be aware of his movements, Bill mechanically refilled the tumbler.

"When did you hear about it?"

"Seth jest told me."

"Well, now, ain't St. Julian humpin' herself? There'll be a reg'lar boom here before long, an' the sooner I stake out a quarter section in the suburbs the better it'll be. Say, Bill, is the lady married?"

"No, an' Seth 'lows she ain't even got a feller."

Mr. Grant rubbed the end of his red nose reflectively and then examined, by the aid of the mirror behind the bar, that very prominent portion of his face.

"Bill," he said, solemnly, after a long pause, "it stands us in hand to fix the tbing up in shape when she gets here. It won't do for her to think we're chumps, or that this town is any slouch."

"The boys are allers ready to stand their share of the drinks," Bill replied, musingly.

"You're a fool! This 'ere is a lady, an' she shau't be insulted by any one in the Palace while I'm a runniu' of it."

Mr. Grant was very angry, as might have been told by the fact that he removed the bottle from the bar, replacing it on the shelf as Bill asked in amazement:

"Now, what's crawlin' on yer, Joe? I didn't 'low I was sayin' anythin' agin the lady."

"I dunno as it's your fault, Bill; but you don't seem to have any style about yer. 'Tain't jest the thing to tell that the boys'll set up the drinks in a case like this. Youth an' beauty is what St. Julian needs to make her a great city, an' it won't do to discourage the beginnin' of the boom."



All this was said in a fatherly tone, much as if it caused the speaker pain to administer the reproof, and then Mr. Grant returned the bottle to the counter as a method of restoring kindly feelings, after which the startling news was discussed in all its bearings.

The proprietor of the Palace was eager to make of the coming arrival an important public event. Not because Miss Hammond's brother was a good or even a regular customer, but in order to show how well such things could be done in St. Julian. Mr. Grant had so much to say regarding the matter during the remainder of the afternoon that his friends proposed to appoint a committee, of which he should be chairman, to make all supposedly necessary arrangements for the intended festivities.

"What Conestoga Joe, Big Bill an' Limpy Jake says goes," an enthusiastic miner shouted, naming the committee on receptions, "an' what they don't know about sich things ain't worth knowin'. Come up, all hands; this round is on me."

Not until the following morning did Seth Hammond learn of the proposed festivities, for he visited the Palace only at rare intervals, and then the scheme received what Mr. Grant pathetically termed "a black eye."

"I want you to see that all this nonsense is stopped," Seth said, sternly, to Bill, who had come to the salted claim very early to tell of the honor in store for the visitor. "Alice isn't the kind of a girl who would like such things, and if you fellows want to be particularly kind to her, keep quiet."

"Joe has set his heart on it, more so because this will be the first real blow-out since Grub-Stake Gulch changed its name."

"The majority of the boys were fully a week welcoming St. Julian, and that should be enough, particularly so since none of them are striking it very rich. If you persist in making fools of yourselves, I'll go out to meet

the stage and smuggle her into town during the night."

"Don't do that, Seth," Bill cried in alarm. "We haven't had so many women here that we can afford to lose sight of one the minute she arrives. Why, the boys are gettin' themselves up in great shape on account of her. Limpy has gone over to the Creek for biled shirts, an' pretty nigh the whole gang will show great harness."

"There can be no objection to anything of that kind, hnt more would be disagreeable. Alice is not well; consumptive tendencies are about all she inherited from her parents, and she is coming here in search of health because I cannot afford to send her to a civilized section of the country. That was why I spent so much time making my shanty a little more comfortable than the others; and if I can make a strike to buy a pony and saddle, there will be good chance of her growing strong again."

"An outfit of that kind don't cost much."

"More than I can pay just now, because all the cash has been used in bringing her out from the East."

Bill was silent for some time, and then, as Seth resumed his work, he said, hesitatingly:

"Some of the boys think you paid too much for this 'ere claim, an' talk about saltin'; but that's where they're way off. It's been pretty tough lines for you, I'm willin' to admit, an' perhaps things can be squared by my autain' up enough to buy the outfit for your sister; she needn't know that I had anything to do with it."

"No, Bill; a trade is a trade, and if I got the worst of it no one ever heard me grumble. Alice can get along without the pony, and in a short time I hope to strike the vein."

It could easily be seen by the expression on Bill's face that he had but little hope of any such good fortune, and after again vainly urging Seth to accept the necessary amount,

not literally besieged for news, as on all former occasions.

The throng on the veranda thought of nothing but the weary-looking girl on the rear seat, who, leaning over as the team stopped, clasped Seth around the neck and kissed him again and again, regardless of the admiring but envious audience.

When the first greetings were over Seth turned to the men, holding his sister's hand in his, and said:

"It would take too much time to formally introduce each one in turn, therefore we will make it general. Gentlemen, this is my sister Alice, who, I am certain, will always be pleased to meet her brother's friends."

In an instant every member of the large party was bowing and scraping as if his life depended upon the vigor of his movements, and for a few seconds it seemed to the bewildered girl as if a perfect sea of starched shirt fronts was rising and falling before her.

Mr. Grant, at the extreme edge of the veranda, was the most active, and as he flourished to and fro with a very large hand on the left side of the yet larger expanse of white linen, it appeared as if he would topple over at each extravagant gesture. He succeeded in preserving his equilibrium, however, and when Seth motioned for his sister to descend, the proprietor of the Palace leaped lightly to the ground, a smirk of satisfaction overspreading his crimson features at the idea of having thus gotten the best of Limpy Jake, who had vowed to perform this service or "bust a girth."

"You will be obliged to walk from here home," Seth said, as his sister hesitated; and then when she descended, hardly touching Mr. Grant's enormous fingers, every Gulcher who could get near the stage scrambled for the honor of carrying a portion of her baggage.

"I have left my packages," Alice exclaimed, as her brother was about to lead her away; and he replied, with a laugh:

"It would be useless to try for any of them now. The boys are determined to show that you are welcome in St. Julian."

"They are very much more kind than one would judge from their faces," Alice said, a moment later, when on half turning she saw a long procession of men, some holding a shawl or hook as if it was a living thing not to be touched too rudely, and the remainder of the entire party acting as guides or assistants.

Not until Seth and his sister were inside the tiny house and the goods laid carefully on the floor did the self-elected escort show any signs of leaving them alone, and then, advancing a few paces, Mr. Grant said, with a low bow:

"So long as you grace the town of St. Julian with your sweet presence, Miss, every man Jack of us stands ready to give you the biggest kind of a boom. There's nothin' here too good for you, an' I'll bet my bottom dollar that this town will jest get up an' hump herself a-tryin' to make things lively so's you shan't be lonesome."

At the conclusion of this brief but eloquent speech the remainder of the party gave three cheers for the new arrival, and then adjourned to the Palace in order to do full justice to the occasion.

CHAPTER II.

DELICATE ATTENTIONS.

During the first evening in St. Julian, while the inhabitants of the town were celebrating her arrival with more noise than sobriety, Alice discussed the future with her brother.

She had expected to "rough it" while living with Seth, but the reality was even worse than the anticipations, and although having no home, she felt decidedly homesick. The frail structure with four tiny rooms appeared anything rather than cleanly or comfortable, and after a long pause Seth said, much as if he could read her thoughts:

"It is only by comparison that we are able to realize, fully, our surroundings. Wait until you have seen the dwellings in St. Julian, and then this shanty will appear almost palatial. We are just far enough away from the center of the town to avoid seeing the fights which frequently vary the monotony, and yet within hailing distance if assistance is required."

"Do you think I am disheartened?" she asked, with a faint smile.

"It would be strange if you were not decidedly so at first; but after a few days the surroundings which now appear so strange will become familiar, and the invigorating climate is certain to bring back the color to your cheeks. Even if I could have sent you

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sufficient money on which to live at some fashionable resort, I doubt if as much bodily benefit could be derived where the mental excitement must necessarily be greater."

"I prefer to be with you rather than anywhere else, however great might be the advantages, and am really surprised that you have succeeded in making such a house look so comfortable. Now tell me plainly how you are progressing. Since the day on which the claim was purchased I have heard very little regarding your prospects."

Seth sighed. The cheery smile faded from his lips, and it was with evident disinclination that he replied:

"If I didn't tell the exact truth you would be sure to hear it from some of the boys, therefore it is best you understood the true position of affairs."

"Is it so bad that such a long preface is necessary?" Alice asked, as he hesitated an instant.

"Except for the fact that the prospects seemed so flattering at first it would not be; but I allowed myself to be elated, and must suffer a corresponding depression. There can be no question but that the claim was salted."

"What do you mean by that?"

"Gold had been buried by the fellow who owned it, and when the first tenderfoot came along, which chanced to be me, the indications were that sufficient would be taken out to make good the purchase money, even though a true vein could not be found."

"Then, since coming here you have dug no gold?"

"The only color seen has been what had been placed there by Bill, as I firmly believe."

"Why not try somewhere else?"

"For several reasons. The first and most important is that my capital has been nearly exhausted. I am comfortably fixed, own considerable land which will be valuable if the Gulch continues to increase in population, and lastly, I cannot give up all hope of striking it rich some day, because two true veins have been discovered near me. I shall hold out until there is no longer any possibility of believing fortune will smile on me."

Until a reasonably late hour in the evening the brother and sister discussed the condition of affairs, and when they finally retired, the shouts and songs, with now and then an occasional pistol shot from the direction of the Palace, told that Mr. Grant and his friends were yet industriously engaged in celebrating the new arrival.

Seth was an early riser, as every bachelor who acts as his own housekeeper is forced to be; but Alice was already in the little, ill-contrived kitchen when he entered.

"Why did you get up?" he asked, reproachfully. "I intended that you should have a long rest."

"I was awake, and wanted to get breakfast before you started on your journey."

"What journey?" Seth asked in surprise. "I am intending to go nowhere except to the claim."

"Then why are so many horses fastened near the house?"

Seth opened the door. Four ponies, saddled and bridled, were picketed close by, and from the mane of each hung a long strip of brown paper. Hastily examining these unusual adornments Seth read in turn:

"For mis Alice," "For the fairest flower in St. Julian," "The putiest girl oughter have the fastest boss," "Keep him from yures til deth."

Nearly convulsed with inward laughter, and not daring to give vent to his mirth lest some of the donors should be in the immediate vicinity, Seth beckoned for his sister to read the inscriptions, and when it was possible to speak intelligibly, he told of the conversation regarding a pony just before her arrival.

"Bill has told the other boys, and this is the result," he added. "The first pony is his; the second I am certain was sent by Conestoga Joe, but the others I fail to recognize."

"But what shall we do?" Alice asked in dismay. "We cannot keep them."

"Certainly not. I will take them down to the Palace at once; but it's going to be a hard job to make the owners receive their property. I had rather undertake almost anything else. But what can't be cured must be endured."

To Alice there was nothing comical in this anonymous presentation of four ponies. She thought only of the kindly feelings which prompted the gifts, and felt almost distressed at the thought of being obliged to send them back without thanking the donors in person.

"I hope you arranged the matter in such a manner that the gentlemen won't feel hurt," she said, when Seth finally returned, literally shaking with suppressed mirth.

"There is no doubt about that, although it was far from being an easy matter. I really believe you could have every pony in camp by simply expressing such a desire. Half a dozen of the boys, including Conestoga Joe, are ready to lay the most vigorous siege to your heart, rather as a matter of pride than affection, and the important question is whether I shall be warranted in putting you in a cage to prevent a too early departure from the nest."

Alice very plainly intimated that there was no reason why Seth should feel any particular anxiety in the premises, and prevented him from making a reply by announcing that breakfast had been ready so long it was absolutely necessary to partake of the food at once, or take the chances of losing it entirely.

When the meal had been eaten it was con-

siderably later than Seth usually began work, and he was forced to hurry from the house with no more of a leave-taking than was contained in the words:

"If you get lonesome before noon, ask anyone to show you where 'Hammond's folly' is located, and then you can see the hole for which I paid five hundred dollars."

"I certainly do want to see it, but don't intend to gratify my curiosity until after this house has been set to rights."

Seth started out, feeling more encouraged than ever before since his arrival at the Gulch, for now he had a real home to which he could come when the day's labor was ended; and Alice busied herself with the household duties, fully resolved to aid her brother in the struggle for gold by every means in her power.

Only a man who has kept bachelor's hall knows how much one pair of woman's hands can accomplish in the way of bringing home comforts out of the chaos caused by awkward housekeeping, and Seth began to have some idea of this when he returned for dinner with the old story that thus far his labors were apparently useless.

"We may be obliged to pull up stakes and turn prospectors," he said, cheerily, "but that won't happen for some time yet."

"Didn't you find anything to give you courage?"

"As a matter of fact, I have done very little work because of the many visitors who were eager to learn what you thought of St. Julian; but now that curiosity has been at least partially satisfied, I may have better news to-night."

"And, in the meanwhile, we are rapidly devouring your small capital."

"It can't be helped. Even in the gold mines one requires a certain amount of money which must be expended on a venture that is more often a losing than a paying one."

Then Seth went to work again and Alice busied herself about the small house until the declining sun allowed the heralds of approaching night to cover the earth with a sombre mantle. But Seth had not returned as he promised.

Quite naturally her first thought was that some accident had happened; but she tried to console herself by saying that the miners would have informed her at once in such a case, and continued her labors an hour longer, when the suspense became so great that it was impossible to remain at home.

"I must go to learn why he does not come," she said to herself, winding a light scarf around her head and shoulders after a most picturesque fashion. "He surely wouldn't remain away so long without some very serious cause."

Her hand was already on the latch of the door when a loud knock sent the blood bounding through her veins in fever flood, for the first thought was that the messenger had come to tell of some disaster.

Not until fully a minute elapsed could she summon sufficient courage to open the door, and before her stood the proprietor of the Palace, with one huge hand on the left side of his now crumpled shirt, as he bowed after the most approved reception manner.

"What has happened?" she cried, in a shrill tone of undefined terror. "Where is Seth?"

"Down at the lower edge of the Gulch tryin' to stand off a lot of the boys who allow there's nothin' to be done but string up a hoss thief we caught this afternoon. I'm willin' to go considerable on his pluck, but jest now he's on the wrong side, an' is bound to be downed."

"What do you mean?" she cried, in perplexity, not understanding the slang of the Gulch. "Is Seth hurt?"

"No, but I'm afraid he will be if we can't do somethin' to kinder amuse the boys. You see, he's backed up the wrong tree, for we nabbed the stranger on Jake's hoss what was stole last week, an' out this way a little bump around them fellers' necks is the only thing that'll cure the disease of lightin' out with bronchos what don't carry the right brand."

"Tell me where Seth is?" Alice asked, imploringly, yet further bewildered by the odd manner of speech.

"Why, I told you he was tryin' to stand off a lot of the boys," Mr. Grant repeated, surprised that his very plain words had not been understood.

"Then he is safe?"

"For a while; but I can't say how long, an' seein' I couldn't do him any good, it struck me you might persuade him to come away till the fun is over. It's the first hoss thief we've caught in St. Julian, an' we're bound to do the square thing."

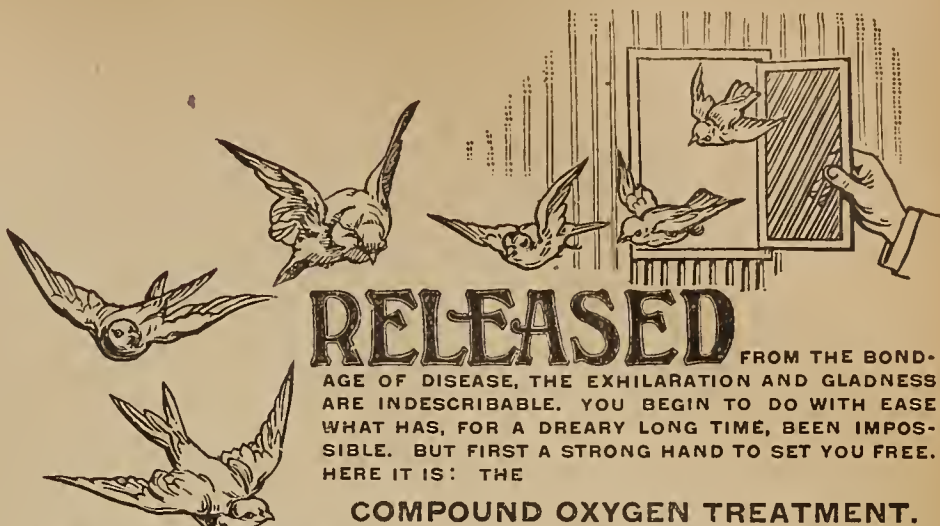
"Shall I come with you?" Alice asked impatiently.

"If you'd be so obligin'; it would make the boys turn pretty nigh green." And again Mr. Grant indulged in a series of wonderful contortions which were only ended as Alice came out of the house with the evident intention of finding her way to Seth unaided.

Her face had paled to the hue of death, save on either cheek where flamed a spot of crimson, and for a few seconds she appeared to think herself alone.

"It kinder broke me all up when you sent the pony back this mornin', for I counted on you takin' him in as his owner would like to be taken," the proprietor of the Palace began; but Alice interrupted him by asking, in a voice which sounded strangely unnatural, even to herself:

"Was I mistaken in thinking from what you



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said that the miners were trying to lynch a man?"

"Not a bit of it, an' I want you to get Seth out the way so it can be done in style. It would jest about break me all up if the affair didn't go off as it oughter. You see—"

"Are you in favor of banging a man without giving him a chance for his life?" Alice cried, sharply, hurrying forward yet faster as she spoke.

"That's jest what be has had. We caught him on Jake's broncho, an' I don't allow there's much more to be said. He couldn't clear himself now if he was to talk till he was black in the face."

"But it is murder!" And now Alice was literally running, although wholly ignorant of the proper direction.

"Wait till you've lived here a month an' you'll see that it's nothin' more'n a square deal. Take my arm, an' let's have a chat; I reckon Seth will hold 'em off a while longer, though you must coax him away as soon as you can after we get there."

"Did you think I would ask him to leave a fellow creature to be murdered?" she asked, turning upon him so suddenly that he was forced to halt.

"But this ain't a fellow creature, Miss Hammond; he's a hoss thief!"

"In which direction are we to go?" was the stern question.

"Straight down the road till you come to the big cottonwood."

Alice waited to hear no more. She started off at full speed, leaving her asthmatic admirer to follow as best he could, and intent only on saving a human life, although how this might be done she had no definite idea.

[To be continued.]

BURPEE'S FARM ANNUAL FOR 1891.

Burpee's Farm Annual for 1891 is the handsomest Seed Catalogue ever published by W. Atlee Burpee & Co., the well known Philadelphia Seedsmen. It contains 168 pages with hundreds of illustrations and several beautiful colored plates painted from nature and will be found thoroughly reliable in its descriptions of all the leading Garden, Farm and Flower seeds, Summer Flowering Bulbs and Plants. It also describes with lifelike illustrations a number of important Novelties which are now being exclusively introduced by the publishers.

The book is handsomely bound in an illuminated cover on which is shown a portion of Fordhook Farm, where the firm, beside growing valuable seed stocks, conduct the most comprehensive trials of all known varieties. The exceptional care given to the growing and testing of all seeds sold by W. Atlee Burpee & Co., has established for them an enviable reputation throughout the world and their Farm Annual for 1891 will be found in every respect a thoroughly trustworthy Guide for the farm and garden. Although so expensive a book, it is sent free to all who have occasion to purchase seeds.

KANSAS has more miles of railroad than all the New England states put together.

A NOVEL AND POPULAR PLAN FOR SELLING PIANOS AND ORGANS

Has been introduced by the Marchal & Smith Piano Co., of New York. They make it easy for anyone to buy of them, and by giving a trial in your own home you are sure of being suited if you buy of them. Their instruments must be beautiful, as well as perfect, to be sold in this way; and the expressions of delight that come from their patrons show that they possess many grand and noble qualities. The liberal dealings of the Marchal & Smith Piano Co., deserve approval and should be tested by all who want a piano or an organ. Those who wish for particulars address them at 235 East 21st Street, New York.

DONALD KENNEDY Of Roxbury, Mass., says

Don't write to me when taking the first bottle of my Medical Discovery. I know how it makes you feel, but it's all right. There are certain cases where the Discovery takes hold sharp, but it is the diseased spot in you it has taken hold of, and that's what you want. The Discovery has a search warrant for every humor, from backache to scrofula, inside and outside, and of course it makes a disturbance in your poor body, but the fight is short, you are better by the second bottle; if not, then tell me about it, and I will advise. I will, however, in the future, as in the past, answer any letter from a nursing mother.

Sincerely yours,
DONALD KENNEDY,
ROXBURY, MASS.

\$75 PER MONTH SALARY
and expenses paid, any active man or woman to sell a line of Silver Plated Ware, Watches and Jewelry by sample only; can live at home. We furnish Team Free. Full particulars and sample case free. We mean just what we say, and do exactly as we agree. Address at once, Standard Silverware Co., Boston, Mass.

ONE YEAR FREE!

pertaining to the household. Silk Dresses, Gold Watches, Dinner Sets, Tea Sets and other valuable articles given as premiums to club raisers. Address MODERN QUEEN CO., New Haven, Conn.

SEND US 10 CENTS

to pay postage, and the names and addresses of 15 lady friends that you think would like sample copies of

The Modern Queen,

and we will mail it to you one year free of cost. The Modern Queen is a large 16 page, 64 column, illustrated magazine. One of the best published. Devoted to Fiction, Fashion, Flowers, Fancy Work, Art Needle Work, Stamping, Designing, Home Decorations, Cooking, Sewing, etc. Illustrated circulars on rare coins free at office or mailed for two stamps. AGENTS WANTED.



FOR YOU

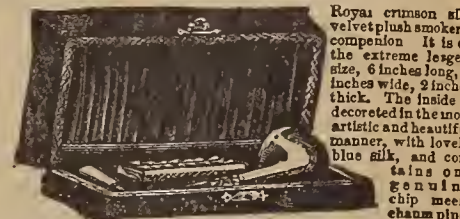
MR. PARMELEE sold in three days, 116 Copper Coins for \$6,915, 29 Silver Coins for \$4,713, 1 Gold Coin for \$1,760. And we can prove that others have done nearly as well.

Coin Collecting Pays Big

If you have any Old Coins or Proofs coined before 1878, save them, as they might be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps.

Numismatic Bank, Court Street, Boston, Mass.

A BEAUTIFUL GIFT.



Royal crimson silk velvet plush smoker's companion. It is of the extreme largest size, 6 inches long, 3 inches wide, 2 inches thick. The inside is decorated in the most artistic and beautiful manner, with lovely blue silk, and contains one genuine chip meerschaum pipe. The bowl of the pipe is made of the chips of the best genuine meerschaum. It is a magnificent pipe in every way; it has a silver stem and mouthpiece, silver plated, which can be taken apart to clean pipe, and is never sold by tobacconists for less than two dollars. It also contains a cigar holder made of genuine meerschaum with genuine amber mouth piece, and is well worth half a dollar; and contains one solid German silver match box. The case on the outside is covered with genuine crimson silk velvet plush; such cases have been selling for as much as five dollars. To introduce our goods, for 30 days only, we will send you our royal crimson silk velvet plush smoker's companion for only 99c. Charges all prepaid and satisfaction guaranteed or money refunded. This offer is made only to those who will endeavor to introduce our goods, otherwise we charge \$3.00. Address WM. WILLIAMS, 125 Halstead St., Chicago, Ill.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Household.

SUN AND RAIN.

A young wife stood at the lattice pane,
In a study sad and "brown,"
Watching the dreary, ceaseless rain,
Steadily pouring down—
Drip, drip, drip,
It kept on its tireless play,
And the poor little woman sighed, "Ah, me!
What a wretched, weary day!"

An eager hand at the door,
A step as if one in haste,
A kiss on her lips once more,
And an arm around her waist!
Throb, throb, throb,
Went her little heart, grateful and gay,
And she thought with a smile, "Well, after all,
It isn't so dull to-day!"

Forgot was the plashing rain,
And the lowering skies above,
For the sombre room was lighted again
By the blessed sun o' love!

"Love, love, love!"
Ran the little wife's murmur'd lay;
"Without it may threaten and frown if it will;
Within what a golden day!"

HOME TOPICS.

CARE OF ROOMS.—In the first place, supply yourself with the necessary conveniences for sweeping and dusting. If you have a house of medium size to take care of, don't try to make one old, stub broom do duty for the whole house. It is not economy, for it will wear out your carpets twice as fast as a good broom. Have a broom for the parlor, another for the chambers, and keep it upstairs with a dust-pan, so as to save running up and down stairs. After sweeping the chambers, empty the dust into a paper, carry it down and put it in the stove; then your dust-pan will be there when you want it again. After one of these brooms is too much worn for use in parlor or chamber, take it for the kitchen.

A good whisk-broom is needed to brush out corners and upholstered furniture, and I like it best for sweeping the stairs. Have a feather duster for books, pictures and ornaments, and a soft dust-cloth for other dusting. Turkey wings and bunches of the tail feathers will answer the purpose of feather dusters. If you have time, a nice duster can be made of the tail feathers by putting them on a handle. I have made them, using a piece of an old parasol handle, and putting on row after row of the feathers, winding each time with a stout twine, and sewing a piece of red flannel over, after the feathers are all on, to cover the ends.

A bag made of cotton flannel, with the fuzzy side out, and with a draw-string, to be drawn on over the broom, is nice to dust the walls or a painted or stained floor, and will save washing the floor a great deal. I made several of these a few days ago, and also three or four dust-cloths, from an old, cloth outing wrapper, and find them very nice. Cheese-cloth or old cambric makes good dusters.

When doing the regular sweeping, it is a good plan to have covers for the large pieces of furniture that cannot be moved out of the room. Old sheets or squares of calico will make these.

To sweep the parlor, begin by taking all ornaments from mantel and brackets, dust them and put them away. Roll the shades to the top of the windows, shake the curtain drapery and tuck it up out of the way. Take the rugs out, shake and hang them on the line; dust all the chairs and small pieces of furniture, and set them out of the room; dust the large pieces and cover them. Brush out the corners of the room with the whisk-broom, also under book-cases or heavy articles that cannot be moved. Then open the windows and sweep towards the middle of the room, and take up the dust there, if the floor is carpeted all over. If a large rug is on the floor, with a strip of bare floor around it, sweep the rug thoroughly, then around it, and take up the dust. After the dust settles, dust the walls, woodwork and pictures, wipe the bare floor, if there is any. It will brighten the carpet to have a clean, white cloth in a mop, wring it out of clear water and go over the carpet with it, rinsing it out as often as necessary; this will take up the dust that settles after the sweeping.

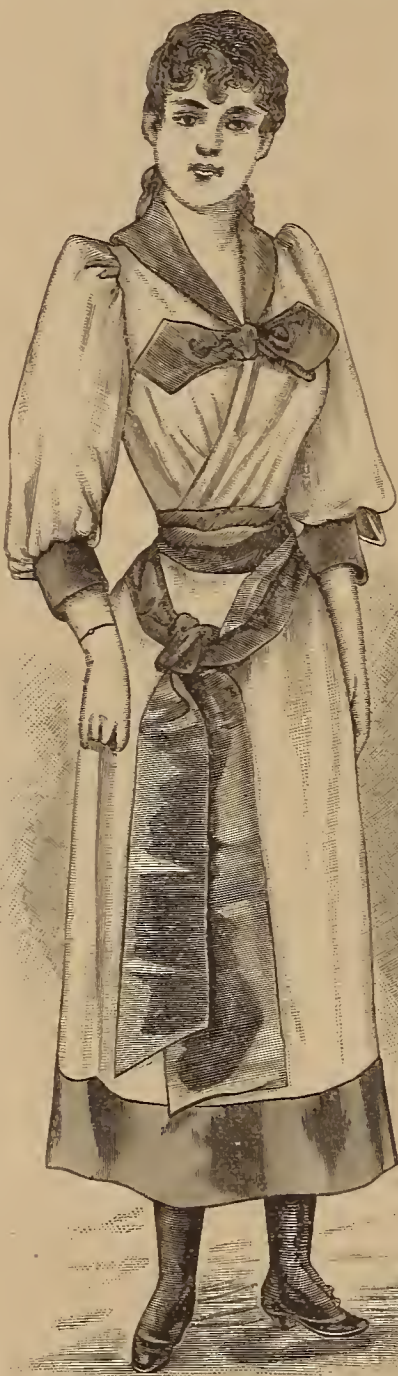
In dusting with a cloth, wipe the articles and shake the cloth occasionally out of the window. A chamois-skin is

the best duster for pianos and nice furniture. A good one will only cost twenty-five cents and will last for years. When soiled, wash them with soap and cold water, and after they are dry, a little rubbing between the hands will make them as soft as ever. Proceed in about the same manner with other rooms, and when you are through your house will be thoroughly clean.

NIGHT-CLOTHES.—Clothing that is worn during the day, ought never to be worn at night. It seems hardly necessary to say this, and yet I know intelligent people who never change their underclothing at night, during cold weather, and argue that it would be a waste of vitality to do so, as if clothing absorbed vitality from the body and then gave it back again.

Everyone should have sleeping-garments made of cotton or wool, and on retiring, remove every article which has been worn through the day. Heavy, unbleached cotton makes very good gowns for winter. Where wool is worn during the day, cotton is usually better for night, as there is danger of overstimulating the skin if wool is worn constantly.

If a cotton garment is not warm enough, wear a short wool sack over the cotton gown. These are useful for young children who are apt to throw their arms out



GIRL'S SCHOOL DRESS.

of bed, and also for the mothers of nursing babies.

Persons who are troubled with cold feet, will be made more comfortable by wearing loose, wool bed-socks, warming the feet well and giving them a brisk rubbing just before retiring.

MAIDA McL.

GIRL'S SCHOOL DRESS.

After Christmas there is always a giving way of the winter clothes, nearly always in the waist and sleeves. A suit can often be taken apart, the material washed, a little new trimming added, and it will take on a new lease of life for the remainder of the winter and do for the cooler days of summer.

Our model, made in dark gray and red, black and a dull plaid, or a plaid trimmed with plain, is very effective.

Just after the holidays there is always a clearing-out sale of stock, and very nice goods can be bought cheap at this time. Short lengths that make nice children's dresses can be had at half the price before.

It always pays to get good material for school wear, as it costs the same to make it, and poor materials wear shabby so soon, and then is shabby to the end. Heavy cloths, bourettes, serges and such materials are the best for service. Heavy braids, Hercules braids, should be used to trim them. C. I.

SOME DAINTY DISHES FOR THE FARMER'S HOUSEHOLD.

While the country housekeeper has not the advantages of the city market, she has material for making very excellent dishes on the farm, some of which are not used at all, such as beef kidneys and livers, calf's head and feet, tongue and sweet breads, as well as other articles of food equally good if prepared with variety. The following recipes are all economical and will be found acceptable to the farmer's family.

SPICED BEEF'S HEART.—Soak a heart three hours in cold water. Mix one teaspoonful of allspice, half a teaspoonful of cloves, half a teaspoonful of cinnamon, quarter of a teaspoonful of mace, half a grated nutmeg, three tablespoonfuls of vinegar and half a teaspoonful of pepper. Put this mixture into the heart, rub well over the outside and stand in a cold place over night. In the morning wrap in a cloth, put in a sauce-pan, simmer slowly for three hours; take out, remove the cloth, brown in the oven, set aside to cool. Slice thin for tea or lunch.

LARDED AND SPICED TONGUE.—Wash a fresh beef's tongue, put it in boiling water and simmer gently for two hours; take up, skin and trim off the roots. Put two ounces of butter in a sauce-pan, let brown, add two tablespoonfuls of flour; stir and pour in a quart of the water in which the tongue was boiled, stir until it comes to a boil and add one chopped onion, one sliced carrot, half a teaspoonful of ground cloves, half a teaspoonful of allspice, half a teaspoonful of black pepper and a teaspoonful of salt. Lard the tongue with narrow strips of bacon, put it into the stew-pan and simmer for two hours. Take up, pour the sauce over and serve.

DRESSED CALF'S HEAD.—Saw the calf's head into halves lengthwise. Take out the brains and put in cold water. Wash and clean the head well, put in a kettle, cover with boiling water, set over a moderate fire; add one onion, one stalk of celery, three or four cloves and a teaspoonful of salt; let boil slowly till tender. Skin the brains, put in a small sauce-pan, cover with boiling water, add a teaspoonful of salt and let simmer fifteen minutes; take out, chop and set aside. When the head is done, take from the water, remove the tongue, skin and slice thin. Trim all the meat from the bones, lay it with the tongue and brains in the center of a heated dish. Prepare sauce with one tablespoonful of butter and two of flour mixed together and put in a frying-pan with one pint of soup stock; let boil, season with a teaspoonful of mushroom catsup, a tablespoonful of Worcestershire sauce, a little salt and pepper. Let simmer five minutes and pour over the head. This is a delicious dish.

BRAISED CALF'S LIVER.—Wash a calf's liver and lard it with a quarter of a pound of salt pork. Wash and cut one onion, one turnip, one carrot and one stalk of celery; put them in the bottom of a braising-pan or a deep baking-pan; lay the liver on the vegetables, add stock or water to cover, put a lid on the pan and bake in a moderate oven for two hours. When done, take up the liver. Put an ounce of butter in a frying-pan and stir until brown, add a tablespoonful of flour; mix and strain the liquor from the other pan into this, let boil, season with mushroom catsup, Worcestershire sauce, salt and pepper. Pour over the liver and serve.

STEWED SWEETBREADS.—Take two plump sweetbreads and soak in salt and water for one hour, then parboil in fresh water, take up and press between two plates until cold. Remove the skin and gristle, put them in a sauce-pan, cover with half a pint of soup stock and stew until done; take up, drain and pour over mushroom sauce.

BEEF BRAIN CROQUETTES.—Wash the brains, skin, put in a sauce-pan and boil until tender. When done, throw in cold water; when cool, chop fine, mix with

some of the liquor in which they were boiled and add half a pint of milk, a tablespoonful of butter, two of flour, one tablespoonful of chopped parsley, a teaspoonful of onion juice, a teaspoonful of salt, a little cayenne and nutmeg; put in a sauce-pan, set on the fire and beat until well mixed, then turn out on a dish to cool. When hard, form in croquettes; dip first in egg and then in bread crumbs and fry in boiling lard. Garnish with parsley and serve hot.

KIDNEY, TERRAPIN STYLE.—Prepare and clean fresh beef kidneys. Put a tablespoonful of butter in a frying-pan; when melted add a tablespoonful of flour, mix, add a half pint of milk, stir until it boils; cut the kidneys in small pieces and put in with salt and pepper to taste. Stir until done; take from the fire, add the yolk of a beaten egg, the juice of half a lemon, a teaspoonful of currant jelly and a tablespoonful of chopped parsley. Serve immediately. ELIZA R. PARKER.

WINTER FLOWERS.

I wish all the dear flower lovers of the household could take a peep in my bay window to-day and enjoy with me my lovely flowers.

Chinese lilies, Roman hyacinths, narcissus, geraniums, fuchsias and begonias, all in full bloom and filling the window with beauty and the room with fragrance.

There were some lovely tea roses and white carnations there this morning, but all were cut and sent to a little friend's birthday party this evening. The chrysanthemums are nearly all gone and have been carried to a light room in the cellar, where they will ripen their seeds for next season's plants. I find that it pays to raise plants from the seed, for in that way many new varieties are obtained.

So I save all the seeds from my fine collection of early and late chrysanthemums and in March or April I sow them in a box of rich soil, and when they are three or four inches high, transplant to three-inch pots; as soon as the pots get filled with roots, shift into larger pots.

When the plants bloom I can tell what plants are worth cultivating, and those that are single or of poor form or color are thrown away.

I have received quite a number of letters from other flower cultivators and the editor has forwarded several that were sent her for me.

Now, dear friends, please don't bother the editor with letters for me, but send them to my address as given in FARM AND FIRESIDE; they will surely find me.

CHATTA BELLA.

Box 126, West Branch, Mich.

GENTLEMEN'S SOCK.

Use Starlight Spanish yarn, four steel needles, No. 15. Cast 36 stitches on the first needle, and 28 stitches on each of two other needles, making a total of 92 stitches in the round. Knit 36 rounds of ribbing, 2 stitches plain and two stitches seam. The remainder of the sock is worked in plain knitting. Mark with a thread of cotton the two seamed stitches in the center of the first needle, and seam them for seam stitches in the first round and in every alternate round doing 30 rounds.

Thirty-first round—Begin decreasing for the leg; when 3 stitches before the two seam stitches, narrow, 1 plain, seam 2 seam stitches, 1 plain, slip one, 1 plain, pass slip stitch over, knit to the end of the round.

Knit 9 rounds. Decrease the same way in the forty-first, fifty-first, sixty-first and seventy-first rounds, reducing the number of stitches to 82 in the round. Knit 30 rounds for the ankle.

For the heel, knit to the seam stitches, seam those, 20 plain, turn the work, slip the first stitch, seam 41. Leave the other 40 stitches as they are, divided upon two needles till the heel is finished.

Third row of the heel—Slip 1, 19 plain, seam 2, 20 plain.

Fourth row—Slip 1, seam 41. Repeat these two rows till 34 rows are knitted. Then to shape the heel, slip 1, knit to within 3 stitches of the seam stitches, slip 1, 1 plain, pass slip stitch over, 1 plain, seam the 2 seam stitches, 1 plain, narrow, knit plain to end. Seam a row. Repeat these two rows 4 times, then bind off. Hold the cast-off stitches together and sew up.

For the gussets, hold the heel the right side towards you, and pick up on one needle the loops along the edge of the

heel from the right hand corner of the instep needle to the seam at the bottom of the heel, knitting each as you pick it up, and making 28 stitches; on a second needle pick up the loops thence to the left-hand corner of the instep needle, again making 28 stitches; on third needle knit the 40 instep stitches. Knit 1 plain round. Then * on first foot needle, 1 plain, slip 1, 1 plain, pass slip stitch over, knit plain to within 3 stitches of the end of the second foot needle, narrow, 1 plain, knit plain along the instep needle; knit 1 plain round.

Repeat from * till reduced to 80 stitches in the round. Knit straight on round and round till the foot measures 6 inches or $6\frac{1}{2}$ from the picked-up stitches.

For the toe—* on the first foot needle, 2 plain, slip 1, 1 plain, pass slip stitch over, knit plain to within 4 stitches of the end of the second foot needle, narrow, 2 plain, on the instep needle, 2 plain, slip 1, 1 plain, pass slip stitch over, knit plain to within 4 stitches of the end of the needle, narrow, 2 plain, knit 1 plain round.

Repeat from * till reduced to 24 stitches. Slip the 12 foot stitches onto one needle, turn the sock wrong side out, lay the needles level with one another and bind off by knitting together a stitch from each needle.

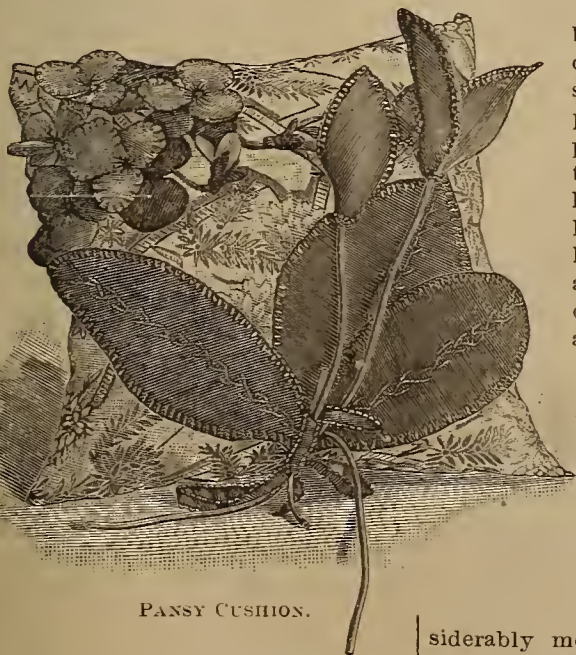
TALMAGE SAYS "SLEEP."

T. De Witt Talmage says: "There is not one man or woman in ten thousand who can afford to do without seven or eight hours' sleep. All those stories written about great men and women who slept only three or four hours a night, make very interesting reading, but I tell you, my readers, no man or woman ever yet kept healthy in body and mind for a number of years with less than seven hours' sleep.

"Americans need more sleep than they are getting. This lack makes them so nervous and the insane asylum so populous. If you can get to bed early, then rise early. If you cannot get to bed till late, then rise late. It may be as Christian for one man to rise at eight as it is for another to rise at five. I counsel my readers to get up when they are rested. But let the rousing bell be rung at least thirty minutes before your public appearance. Physicians say that a sudden jump out of bed gives irregular motion to the pulse. It takes hours to get over a too sudden rising. Give us time, after you call us, to roll over, gaze at the world full in the face and look before we leap."

PANSY CUSHION.

Felt and velvet combined promises to be a favorite decoration this winter. The pin-cushion illustrated is of pale blue satin, the pansies are of pale blue felt, a shade darker than the satin; the upper petals are of velvet. A sixteenth of a yard of felt and as much of velvet would fur-



PANSY CUSHION.

nish pansies for cushion, handkerchief-box and jewel-case. Three patterns are used. One should be cut from velvet, and the other two from felt; a thread of yellow should outline the eye, and a single stitch of bright green in the center gives it a natural appearance. The lines may be put in with black sewing silk, with pen and ink or with the brush. If one is skillful with the latter, a bit of shading in the right place may be used. White pansies with blue markings and fine, narrow, button-hole stitches on the

center of the lowest petals, are pretty mixed in with the blue. The stems are narrow strips of olive green felt, and the leaves are of the same material.

KITE LACE.

Cast on eleven stitches and knit across plain.

First row—Knit 2, o, n, o, n, o, n, o, n, k 1.

Second row—Knit plain.

Third row—K 2, o, n, k 2, o, n, o, n, k 1.

Fourth row—Knit plain.

Fifth row—K 2, o, n, o, k 4, o, k 1, o, n, k 1.

Sixth row—Knit plain.

Seventh row—K 2, o, n, o, k 6, o, k 1, o, n, k 1.

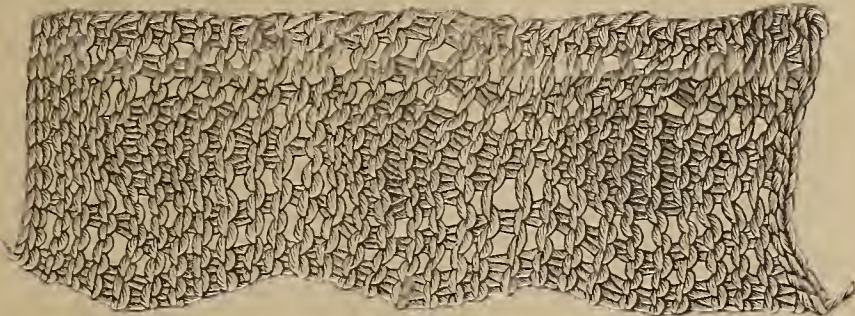
Eighth row—Knit plain.

Ninth row—K 2, o, n, o, k 8, o, k 1, o, n, k 1.

Tenth row—Knit plain.

Eleventh row—K 2, o, n, o, n, k 1, n, n, k 2, o, n, o, n, k 1.

Twelfth row—Knit plain.



KITE LACE.

Thirteenth row—K 2, o, n, o, n, n, k 1, n, o, n, o, n, k 1.

Fourteenth row—Knit plain.

Fifteenth row—K 2, o, n, o, n, k 1, n, o, n, o, n, k 1.

Sixteenth row—Knit plain.

Seventeenth row—K 2, o, n, o, n, n, o, n, o, n, k 1.

Eighteenth row—Knit plain.

Nineteenth row—K 2, o, n, o, k 1, slip and bind 1, o, n, o, n, k 1.

Twentieth row—K 5, n, k 5.

K means knit; o means throw the thread over; n means to narrow. (Knit two stitches together.) ELZA RENAN.

SOMETHING ABOUT JOHN'S BEST SUIT OF CLOTHES.

Perhaps the majority of the lady readers of the FARM AND FIRESIDE have, as a part of their regular work, the supervision of a father's, husband's, or brother's wardrobe, and they understand, as no one else can, how much that involves. It is very easy to soil clothes, but a rather difficult undertaking to clean them, and the professional scourer—a great convenience to the city housewife—is an unknown quantity to most farmers' wives. But, fortunately, many farmers' wives clean nice clothes quite as satisfactorily as the professional cleaner, and let me whisper, save the enormous charges the professional scourer would certainly demand.

John had a very fine suit of black clothes that, somehow or other, he had managed to soil very badly; not one piece alone, but the three pieces. I did not know what to do with them. Brushing had no effect on them. They looked very much as if oil had been sprinkled over them and a liberal peppering of dust added afterwards. When anything is but slightly soiled

I usually clean it with gasoline, but a suit of clothes would require more gasoline than I could possibly spare. Finally I concluded that I could certainly make them no worse in appearance whatever I did, and the chances were that I might make them con-

siderably more presentable than they were. I resolved to try, anyhow. So, one fine, sunny morning I heated a boiler full of rain-water, not cistern water; I had it quite warm, and with my own make of hard soap I made a good suds. (I used my own soap because I knew it was good, and then, too, I had no factory soap on hand.) I plunged the clothes into the suds and allowed them to remain soaking ten or fifteen minutes. Then with a stick I pounded them vigorously some minutes, then I turned each piece inside out and rubbed it on the wash-

board, then run it through the wringer. I then rinsed them thoroughly in very warm rain-water and hung them on the clothes-line until they were almost dry. I had my irons heated ready to begin work when the clothes were ready. I covered my ironing-sheet with a very dark piece of cloth to prevent getting lint on the clothes. I had a piece of black cloth which I wrung out of warm water and laid on the right side of the clothes. I ironed the clothes with the cloth between the iron and them, dampening it as fast as it became dry. I exercised great care in preserving the shape of the pantaloons and sleeves. It required a great deal of careful work, but I felt amply rewarded for my trouble, as the suit had the appearance of a perfectly new suit.

Having been so successful in my first venture, I decided to try my hand on a black cashmere dress of my own. In this case I added a little borax to the wash-water, otherwise the same method was

employed, and the result is as pleasing as I could wish, as neither the suit of clothes nor the dress have shrunk a particle.

Be sure that the rinse-water is as warm as the wash-water, and select a warm day to do such careful work if you would avoid that shrinkage which troubles so many housekeepers who clean their own woollens. ELZA RENAN.

USEFUL HINTS.

Throw away Concord grapes? No, by no means. Until this year my large vine, which is not much, if any, less than thirty years old, and which several have declared bears the sweetest grapes they ever tasted, has been freer from rot than any other variety. This year I found the grapes on one side of the vine decaying badly, partly, perhaps, the result of a heavy hail storm. Having once arrested decay of Isabellas by picking off all brown leaves and decaying grapes and burning them, and then treating the vine with a liberal springling of wood ashes, I tried the same on Concord, with a like result.

Now, some will think this too much trouble, but can we expect to have nice fruit without painstaking? Some, doubtless, like the Syrian leper, will think the remedy too simple, and will prefer to do some great thing; but I believe if the ground for some distance around grape vines could, every fall, have a liberal dressing of ashes, it would pay. I wrote Lewis Roesch, the great Fredonia grape grower, my opinion about ashes for grape vines, also that a gentleman from California, whom I met at the Centennial, told me that California grapes would not hurt any one, for there was so much alkali in the soil there. Mr. R. replied: "I think as you do about wood ashes." So you see I am not alone in my opinion.

Now, I want to tell the sisters how I took care of my grapes. I picked off all green and imperfect grapes, washed the clusters, packed them in Mason glass jars, pushing down stems with a spoon, sprinkling with granulated sugar as I packed; set the covers on lightly, folded a towel and put in bottom of tin boiler, set cans on, set boiler on stove and filled nearly to top of jars, and let the water boil until the grapes were cooked enough; I then screwed covers partly on, and took jars to table, setting them on a folded towel, and finished screwing on covers. I can assure you, when winter comes, grapes put up in this way will surprise any one by their freshness; and the juice is delicious.

To make jelly, I took grapes not over-ripe, squeezed the pulp from the skins, and pressed out a little of the juice from the skins—not enough to make a dark color—set a brown earthen dish in a pan of water, and boiled until pulp could be easily mashed with a spoon; strained twice; boiled juice about twenty minutes, while granulated sugar was heating in a baking-pan in oven; poured sugar, hissing hot, into juice, let it boil up, and

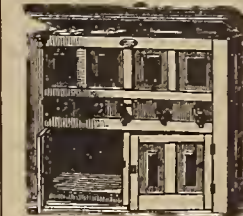
poured into tumbler. It is light and handsome in color, but might have been a trifle clearer if I had strained it into the glasses. Let it stand uncovered while cooling, and then put on paraffine paper or a paper with just enough butter on to make it translucent, pressing closely around the edge, and my jellies, kept in a dark, dry and rather cool place, keep for three years, with no mould on them.

Did any of you ever make sweet corn or watermelon jelly? I took premiums on both; the watermelon jelly is made much like other jelly. Corn kernels split with a sharp knife, scraped from the cob, strained and made like other jelly, is very nice when first made, but will not keep long unless canned. SUSAN B.



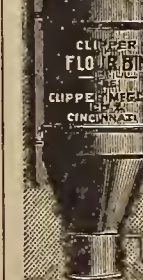
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Our Household.

A CHEAP STORM-DOOR.

Oh, how the wind would whistle through the crevice between the door and the door-frame! Did not the carpenters of thirty years ago know how to hang a door properly? Certainly they did, for doors fit snugly into their frames then. But in the long time between then and now, much of the door had worn away. A new door was not to be thought of; but a remedy for the discomfort the chilling winds caused suggested itself.

Like an inspiration came the thought, "Why not make use of the wire door? A real blessing in summer for keeping out the flies, why not change it into a storm-door and so convert it into, if not a thing of beauty, a joy for a long time?" Yes, the scheme was possible. We procured enough table oilcloth to cover the door; to this we sewed two strips of wood or small laths. We fastened this frail frame to the door (on the outside, of course) with small brads. The brads need not be closer than twelve or eighteen inches, as the frame can then be easily removed in the spring.

We think now, that cotton sheeting muslin, soaked in linseed oil, or if given one or two coats of paint, would be much cheaper and quite as durable as the oilcloth. However, we are well pleased with our storm-door, and the amount of fuel saved by this arrangement more than overbalances the cost of the oilcloth.

In lieu of sand-bags, oats-bags were made to lay over the crevice between the upper and lower window sashes. They were made as long as the window is wide, and four or five inches in circumference. Muslin of a medium quality was the material used. It is surprising how these precautions, trivial in themselves, add to the comfort of those who occupy houses wherein the ventilation is a little more "airy" than is at all times agreeable.

ELZA RENAN.

SKETCHES FROM CANADA.

Directly in front of my window, as I write, is a conical-shaped little hill, its top ablaze with autumn's coat of many colors. Half way down are a few evergreens, hemlock and spruce, forming a sombre contrast. Just at the foot is a clump of beeches—one blaze of brilliant, yellow glory. No bouquet of hot-house exotics was ever one half so beautiful. No artist can ever hope to rival this picture, for it was designed and executed by the Artist whose works are unapproachable.

At my right hand rises a mountain thousands of feet above sea level, its sides also gorgeous with varied tints of yellow, red and brown, its top one bare and frowning mass of rock. Little, thread-like strips of clearing stretch themselves upward on its side, in ambitious but fruitless attempts to reach the top. Between me and it is a wide, fertile valley of cultivated land, thickly dotted with prosperous-looking homesteads, and sprinkled over with herds of grazing cattle. The little brook that tumbles in surprising leaps off the mountain, furnishes water for the engine of the mill in the distance, surrounded with great heaps of peeled logs. Behind me rises Spruce hill, a sheer ascent of bald rocks, their only covering a network of roots, which reach from the heavily-wooded crest to the earth beneath, in search of sustenance. Away in the distance can be seen many peaks and tops of a range to the east of us.

But we dwellers in the country know that despite these hills there is plenty of laud as fruitful as any that ever "laid out doors," and of beauty and picturesqueness unsurpassed. Sometimes the mist and rain comes driving down the hills, shutting out all the view, and bringing us such a feeling of solitude and unutterable content, alone in our little nest of a home. Sometimes the winds roar and howl around the hills, never hitting very hard in these sheltered nooks. Sometimes every little twig and blade of glass glistens like nature's own diamonds in the morning sun, loaded with a weight of dew that bend their tips groundward.

Once in awhile Jack Frost asserts his claim to the country, and proves it to every one's satisfaction, by hanging his icicle badges on all the little cascades, along the caves and from the end of every bush and shrub. When winter shakes her

powder thickly in the air, the children rejoice and say the women are picking geese in Scotland and letting the wind drift the feathers to us. Hurrah, then, for carnivals on every hillside and frozen water surface; for shout and joke, as long strings of logging teams come in sight, loaded with piled-up logs. Every one turns out, with all sorts of carriages on runners, from the fauce sleigh with the screen in front to keep the balls of snow from the horses' feet from making too intimate acquaintance with your cranium, to the bob-sleds and "pungs," all bearing their allotment of people alive and aglow to their finger ends with health and vigor. Pure air and good water everywhere.

If we could manage not to think that we must have a piano because our neighbor has an organ, or a beaver coat because he has one of coonskin, and live simply and unostentatiously as our means permit, enjoying to the full the beautiful scenery and healthy climate God has given us, when such an epidemic of good sense breaks out, we will not need to search further for pleasant and comfortable homes, but just settle happily down to live and die where we were born—in Canada.

F. H.

THE SLATE ON THE KITCHEN WALL.

"What is the big slate for that hangs upon your kitchen wall?" said a visitor to a young housewife the other day. "Oh, that's my memorandum book," was the reply. "When I first began to keep house out in this suburban spot, we would frequently sit down to a meal and discover there was no pepper in the pepper-caster, or vinegar in the cruet, or only one quarter of a loaf of bread in the box, or some little thing like that, which had slipped my memory among the number of more important things I had to think of—by themselves of little account, but just big enough to take the completeness away from a good meal which it needs to be thoroughly enjoyed."

"As our grocer, and baker, and butcher, you see, are all two or three miles away, one cannot tell the girl to clap on her hat, run out and supply the want, as you can who live in the city; so I told John I must have a memorandum book for the kitchen, to jot these wants down in, so that when I did go shopping, or when the tradesmen did call, I would be sure to tell them of everything I wanted."

"The very next day the dear boy brought me home a lovely little book with ivory covers, silver-tipped pencil and celluloid leaves, from which the writing could be erased after the book was full. I tried it for a week, but it was so pretty that if I were baking pies, say, and observed that the cloves were almost gone, I would have to stop and wash the paste from my hands before I could handle that pretty book. Consequently, I used to say, 'Oh, I'll not stop now. I'll just remember that and put it down when I have some others to go with it.' Of course, I forgot all about the cloves until the next time I went to get some and found not half enough. So I relegated the pretty book to the recesses of my bureau drawer and bought a common school slate with a pencil and a sponge attached to it by strings. Whenever I find anything running low in the larder, I jot it down on the slate, one half of one side of which is reserved for the grocer, and the rest for the butcher, the baker, etc. If I'm not in the kitchen when they come, Bridget shows them the slate and they copy down the orders. Then, on the other side of the slate I write instructions for Bridget to follow when I go out, or the page and number in the cook book of the recipe by which I want her to cook certain dishes while I am away. Altogether, I find it exceedingly useful and handy, and would advise all young housekeepers to try it."

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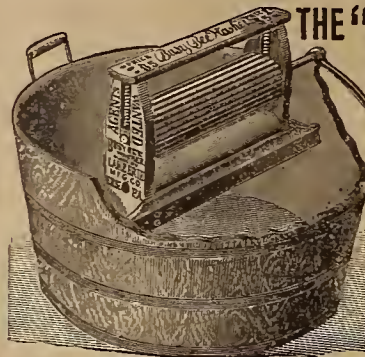
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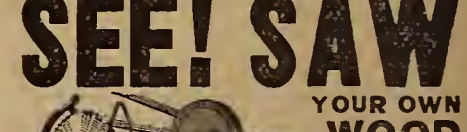
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Our Sunday Afternoon.

SHEARS THE SHEEP.

THEY took up one collection for the heathen in Cathay, Another for the naked kids in Siam far away They passed around the plate again to pay the sexton's bill, Another round—no money came—the church was very still. "Why pay ye not?" the Parson said—his voice was stern and deep—"The Lord would be no shepherd if he did not shear his sheep!"

THE BURDEN OF BIG HOUSES.

AN ideal of earthly comfort, so common that every reader must have seen it, is to get a house so big that it is burdensome to maintain, and fill it up so full of jim-cracks that it is a constant occupation to keep it in order. Then, when the expense of living in it is so great that you cannot afford to go away and rest from the burden of it, the situation is complete, and boarding houses and cemeteries begin to yawn for you. How many Americans, do you suppose, out of the droves that flock annually to Europe, are running away from oppressive houses? When nature undertakes to provide a house, it fits the occupant. Animals who build by instinct build only what they need; but man's building instinct, if it gets a chance to spread itself at all, is boundless, just as all his instincts are. For it is man's peculiarity that nature has filled him with impulses to do things, and left it to his discretion when to stop. She never tells him when he has finished. And perhaps we ought not to be surprised that in so many cases it happens that he doesn't know, but just goes ahead as long as the materials last.

If another man tries to oppress him, he understands that, and is ready to fight to the death and sacrifice all he has, rather than submit, but the tyranny of things is so subtle, so gradual in its approach, and comes so masked with seeming benefits, that it has him hopelessly bound before he suspects his fetters.—*Scribner's Magazine.*

A MOTHER'S HEART.

We ought to watch closely the character of the memories we leave in our homes. One person has left this testimony: "Many a night, as I remember lying quietly in the little upper chamber before sleep came on, there would be a gentle footstep on the stair, the door would noiselessly open and the well-known form softly gliding through the darkness, would appear at my bedside. First there would be a few pleasant inquiries of affection, which gradually deepened into words of counsel. Then, kneeling, her head close to mine, her most earnest hopes and desires would flow forth in prayer. Her tears bespoke the earnestness of her desire. I seem to feel them yet where sometimes they fell on my face. The prayers often passed out of thought in slumber, and came not to mind again for years, but they were not lost." Is it not worth while for every mother to try to weave such memories into the early years of her children's lives?—*Western Christian Advocate.*

IDLENESS A WASTE.

Able-bodied idleness is a shame. It produces nothing and lives on the labor of others. It slights opportunities and wastes the patrimony of life. It lacks good sense and disregards any reward. Indeed, compensation is no part of philosophy.

An active life is a very different thing, the prime motor of which is industry, labor and thrift. It involves health, wealth and pleasure; and hence, reveals the true philosophy of life. More than this, it is the heroic element in nature that levels forests, opens up fruitful fields, builds towns and cities and sounds the busy hum of industry and active labor through the land, and thus makes a nation grow strong and great.—*The National View.*

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SOW THE SEED.

Brethren and sisters, sow the seed. Don't let your good religious literature go to waste; scatter the truth broadcast. "In the morning sow thy seed, and in the evening withhold not thine hand, for thou knowest not whether shall prosper this or that, or whether they both shall be good alike." Eccl. 11. 6. The time for us all to be up and doing is the present, and God will hold us responsible if we withhold the light. Let it shine; tell of Jesus' second coming, for he said (John 14: 2, 3), "In my father's house are many mansions; if it were not so I would have told you. I go to prepare a place for you, and if I go to prepare a place for you, I will come again and receive you unto myself, that where I am there you may be also."

We can all be preachers; for it is not by might nor by power, but by my spirit, saith the Lord of hosts. Eccl. 4: 6. Praise the Lord. We find in John 7: 37, "If any man thirst, let him come unto me and drink." Oh, how sweet to abide in Jesus and honor him by believing his word, that we may be ready to meet him when he comes; for he will come to receive his people unto himself. Scatter the truth.—*Pacific Advocate.*

REST.

In the rush and hurry of modern life rest is the one thing that women imperatively need. The demands upon them are so incessant and so varied that they require nerves braced and steadied by sufficient intervals of absolute relaxation to meet them aright. This tonic influence cannot be secured in any other way as well as by a sufficient quantity of sleep.

We have all joked about "Tired Nature's sweet restorer—balmy sleep," but it is an undeniable fact that most women do not get half enough of it to keep them in a proper condition mentally or physically.

The result is that they bring to their work a tired brain, aching limbs and too often an irritable temper. The duties which should be a pleasure seem an intolerable burden. The demon of hurry, who is as different a personage from his half brother—speed—as daylight is from dark, pursues them, and once in his net they may bid good-by to peace and quietness unless they resolutely break away.

There is one plan by which this may be accomplished. To look the matter fairly in the face, and resolve not to do so many things—to do a few better.—*Ladies' Home Journal.*

"BRIGHTING ALL IT CAN."

The day had been dark and gloomy, when suddenly, toward night, the clouds broke, and the sun's rays streamed through, shedding a flood of golden light upon the whole country.

A sweet voice at the window called out in joyful tones, "Look! Oh, look papa! The sun's brightening all it can."

"Brightening all it can? So it is," answered papa. "And you can be like the sun if you choose."

"How, papa? Tell me how."

"By looking happy and smiling on us all day, and never letting any tearful rain come into the blue of those eyes; only be happy and good, that is all."

The next day the music of the child's voice filled our ears from sunrise to dark; the little heart seemed full of light and love, and when asked why she was so happy, the answer came laughingly: "Why, don't you see, papa, I'm the sun? I'm brightening all I can!"

"And filling the house with sunshine and joy," answered papa.

Cannot little children be like the sun every day, "brightening" all they can? Try it children.—*S. S. Messenger.*

ABUNDANT RECOMPENSE.

The long rest and incomparable splendors of our heavenly inheritance—when the saints shall appear kings and priests unto God, and shall shine as the sun in the kingdom of their father—will be abundant recompense for the witnessing and warring of this life. The witnessing and the warring are for a day, the kingship will be forever. The one is well termed "light affliction," "for a moment," and the other "weight of glory," and "eternal." Children of the kingdom, spring to it; the time is short, and the glory is close at hand. You will be called to the marriage supper of the Lamb before you are aware of it. Have your lamps trimmed and brightly burning.—*Christian Witness.*



Snug little fortunes have been made, work for us, by Anna Page, Austin, Texas, and Jno. Bonn, Toledo, Ohio. See cut. Others are doing as well. Why not you? Some earn over \$500.00 a month. You can do the work and live at home, wherever you are. Even beginners are easily earning from \$5 to \$10 a day. All ages. We show you how and start you. Can work in spare time or all the time. Big money for workers. Failure unknown among them. NEW and wonderful. Particulars free. H. Hallett & Co., Box 880 Portland, Maine



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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Books on Electricity Wanted.—H. A. M., Prairie City, Illinois. D. Van Nostrand Co., New York, can supply you with books on electricity.

Spring Wheat Wanted.—V. M. T., Social Hill, Ark. You can get seed spring wheat of nearly every northern seedman who advertises in our columns.

Jersey Cattle Wanted.—J. R. R., Capitola, Md. You will find numerous advertisements of thoroughbred Jersey cattle for sale, in the *Jersey Bulletin*, Indianapolis, Ind.

Organizing Alliance.—T. H. H., Elyria, Ohio. W. H. Likens, Caledonia, Ohio, is the president of the Ohio State Farmer's Alliance, and he will give you full information about the order, on application.

Haverland Strawberry.—J. S. D., Brighton, Colo., asks where plants can be had. Our inquirer should keep watch of the advertising columns of FARM AND FIRESIDE, and in due season he will find plenty of addresses of dealers in strawberry plants.

Cotton-Seed Meal Wanted.—W. C. M., Prattville, N. Y., asks: "Does any reader know where cotton-seed meal can be bought direct from the producer? We have to buy now from the 'miller's agents' in Boston. We don't know what the producer gets, but we pay \$26 per ton here."

Best Barley for Kansas.—J. L., Louisburg, Kan. Probably your state agricultural experiment station at Manhattan, Kansas, can inform you what is the best variety of barley for your state. Spring barley should be sown at the same time and in the same way that you sow oats. About two bushels per acre is the quantity of seed usually sown.

Wire-Worms on Celery.—C. M. Z., writes: "Will wire-worms work on celery that is planted in muck? The piece of land I intended to plant is full of wire-worms."

REPLY BY JOSEPH:—They are very likely to work on the celery stalks. Try applications of salt, before banking, heavy enough to make the ground near the plants white. The worms work after the plants are earthed up.

Salt for Onions on Marsh Ground.—L. H. M., Alger, Ohio, wishes to know whether it would be advisable to use salt for onions on marsh ground, and how much per acre.

REPLY BY JOSEPH:—The agricultural salt can usually be bought for a few dollars a ton, and I would not hesitate to apply one hundred pounds or more per acre for onions, especially on marsh land. It can do no harm and probably will do good.

Oyster-Shell Lime.—W. H. R., Fairview, Pa., asks about the value of oyster-shell lime for fertilizing purposes. Strictly speaking, it has none, or next to none, except in the rare cases where the soil is destitute of the lime needed for plant growth. For the purpose of unlocking plant foods already in the soil in insoluble combinations, it has about the same value as other lime, and the price of this is regulated by local conditions, no uniform standard being recognized.

Alfalfa for Seed—Weed Extermination.—Mrs. A. M. W., Millville, Pa., writes: "What crop of alfalfa should be left to ripen for seed?—What will kill the so-called 'wild lobelia'? I have cut it off deep with a knife, but it soon sprouts again."

REPLY BY JOSEPH:—Treat alfalfa as you would ordinary clover, cutting first crop for hay.—Obstinate perennial weeds may be killed by cutting off below surface of ground, and putting a drop or two of sulphuric acid (oil of vitriol), or a teaspoonful of kerosene upon the root.

Pruning Trees.—J. R. G., Brownsville, Tenn., asks: "How and when should trees be pruned?"

REPLY BY JOSEPH:—Plum and peach trees may have about one third of the new growth cut back, which job can be done on mild days during winter. Our best authorities object to pruning plums in spring, and many do not prune them at all. I think this cutting back is a good precaution against overbearing and the consequent breaking down of limbs. With apples and pears the most that is needed is to cut out the straight, whip-like shoots that grow along the larger limbs inside the trees, and to remove branches where crowded, dying or diseased. This may be done at any time when most convenient.

Celery Culture.—Mrs. E. T., North Yarmouth, Mass., writes: "I would like to learn something about raising celery—kind of soil, seed, when to sow, etc."

REPLY BY JOSEPH:—Try White Plume, which is easiest to raise, as it needs next to no earthing up. Sow seed as early in spring as a fine, very rich seed bed can be prepared. Sow in rows a foot apart, firm soil well, keep free from weeds; thin plants to twenty-five to the foot. Transplant last of June or beginning of July in specially-prepared, well-manured rows, these to be three feet apart, and the plants six inches apart in the row. Hoe well, and when the plants are a foot or so high, bank earth around their base to keep them growing upright and compact.

Removing Stumps—Leaky Vat—Waterproof Cloth.—W. H. D., East Bethany, N. Y., writes: "What is the easiest and cheapest way of getting rid of stumps?—I have a square sap vat that leaks. What shall I calk it with?—Is there any way of making cotton cloth waterproof?"

REPLY:—Sometimes it is cheaper and better to use a good stump machine; at others, blasting cartridges. If the stumps are old and not too large, a pair of horses, hitched to the end of a long, strong lever, attached to the stump with a heavy chain, can twist them out.—If the vat is used only for holding sap, the cracks can be calked with hem twine and white lead or hydraulic cement.—Stretch the cloth on a wall and apply with a brush a mixture of five parts of boiled linseed oil and four parts of ground litharge.

Fertilizer for Potatoes.—K. L., Marena, Iowa, asks: "What is the best fertilizer for potatoes, and where can I get it?"

REPLY BY JOSEPH:—The "best" fertilizer is the one composed of just the plant foods, and these in just the proportion needed for the crop under each particular soil conditions. Plain superphosphate will be best in all cases where the soil has enough available nitrogen and potash, but is scantily supplied with phosphoric acid, as is the case on many grain farms. Ashes may be best in other cases, or a

complete fertilizer, such as the "special potato manures" made by leading manufacturers, in others. Where people know little about the needs and conditions of their soil, a special potato manure, composed of about 3 to 4 per cent nitrogen, 8 to 12 phosphoric acid, and 6 to 10 potash, and sold by leading fertilizer men at about \$40 to \$45 a ton, is certainly safest to use. The brands made by Mapes, Bowker Fertilizing Co., Lister Bros., Williams & Clark's Co., Powell, Crocker (Buffalo, N. Y.), and many other firms are reliable.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Kneesprung.—J. W. S., Peach Orchard, Ky. Slight improvement and a little more steadiness may be effected by judicious shoeing. There is no cure.

Lame Pig.—G. H. B., Buchwalter, Pa. It does not pay to raise a crippled pig for breeding. The best advice I can give you is to butcher the pig. It is true, it is a boar pig, but it is yet young, and at any rate, will make good sausage meat. It may be advisable, though, to examine its meat for trichinae before using it.

Abscess.—J. C., Cloverdale, Ind. Such an abscess, particularly in a place where pus is apt to burrow down between the muscles, requires careful treatment; the opening, too, must be made at the proper place, otherwise the animal may be crippled for life. I therefore have to advise you to entrust the treatment to a veterinarian. It surely will pay you to do so.

Garret.—D. C. R., Two Taverns, Pa., and W. A., Fairmount, Neb. The remedy consists in milking, milking, milking, once every two hours, until all "corruption" has been removed and the milk has become normal again. For further information I refer you to the answers given to the numerous inquiries headed "garret" in recent numbers of this paper.

Cutaneous Eruption.—J. S. D., Howard, Minn. The cutaneous eruption from which your cattle suffer may be ringworm. If so, you may repeatedly paint the spots with tincture of iodine, say once every day, until they disappear. Applications of carbolic acid, dissolved in water, will also remove them. Internal medicines are of no use, but cleanliness in the stable is.

Incontinence of Urine.—T. G. R., —. Incontinence of urine may be due to partial paralysis of the sphincter of the bladder, but also, and more frequently, to the presence of a stone or of so-called gravel in the bladder. Hence, to ascertain the cause, an examination is required. The treatment consists in removing the cause, which is possible if a stone, or so-called gravel, constitutes the same. But to do it requires an operation which can be performed only by a competent veterinarian.

Colic.—T. O. R., Queen City, Mo. Your mare, it seems, suffers from repeated slight attacks of colic. Feed and water as regularly as you can; do not work the animal immediately after a meal, but give time—at least an hour—to inaugurate digestion before you hitch up, and do not feed heavy food immediately after exercise, but give the animal sufficient time to cool off and quiet down before feeding. More you cannot do. Animals which are frequently afflicted with colic will, as a rule, finally die of it.

Incipient Elephantiasis.—E. F. Lompoc, Cal., writes: "I have a yearling colt that has a big leg, supposed by some to be caused from the effects of distemper, and by others from a snake bite. The leg is about twice as large as it should be. The swelling is from the ankle up to the hock."

ANSWER:—Try bandaging with elastic (woolen flannel) bandages, and keep the swollen leg clean. For further information I have to refer you to the already numerous answers to questions similar and identical to yours.

Bog-Spavin.—W. S. S., Galesburg, Mo. The swelling you complain of appears to be a so-called bog-spavin. It probably will get smaller when the animal gets dry and substantial food. If not, you may apply either gentle pressure, by means of elastic (woolen flannel) bandages or some iodine preparation (tincture of iodine, for instance). Still, such "puffs" are frequently very obstinate, and if they do yield to treatment, they usually return at the least provocation; for instance, a slightly severe exercise, etc. They do not cause any lameness.

Warts.—C. A. H., Milan, Kan. You say, "Neck and shoulders are covered with warts." If you are sure you have to deal with warts, and not with ringworms, a frequent disease in calves, you can remove them, if they have a neck, by means of a ligature, and if flat, by means of caustics. Nitric acid, repeatedly applied by means of a small piece of "surgeon's" sponge fastened to the end of a stick, will answer. Care must be taken to apply it to nothing but the wart. For further information I have to refer you to the answers given to similar questions in almost every number of this paper.

Vertigo.—W. H. R., Catawissa, Pa., writes: "I have a horse that is in good condition and looks well, but there seems to be something wrong with him. After he is hitched up and driven till he begins to get warm, at times he will throw up his head and shake around; sometimes he will nearly raise the front of the ground. In a few minutes it is all over. He acts that way mostly when hitched singly, more than in a double team. He shakes his head as if there were flies or something in his ears."

ANSWER:—It is possible that your horse suffers from slight attacks of vertigo. See to it that the harness fits well in every respect, and does not compress large blood vessels. Pay special attention to the collar, and do not use short check-reins and tight throat-latches.

Swine-Plague.—P. L., Forest City, Neb., writes: "I have many pigs which are dying very fast, though they are perfectly fat. My neighbors tell me that they have the hog measles. They get lame, seem to draw up, have good appetites and their feet are very hot. Their hearts beat very quick and fast and they break out in sores."

ANSWER:—Your pigs seem to be affected with swine-plague, so-called hog-cholera. If they are not too young, you may succeed in saving those not yet diseased by immediately separating them from the sick ones, and taking them to a high and dry and uninfected place, where, of course, they have to be kept

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Over a year ago our newspapers first noticed this wonderful discovery. The *Christian Index*, Dec. 22, says this mode of treatment is the result of the best thought of the medical profession of Europe, where its success is assured. The *Medical Journal* says it is the most important discovery in the history of medicine. The *New York Voice*, Dec. 8, The *Christian Advocate* and The *Express* state that the medical journals of Europe have been teeming with the wonderful cures the Andral-Broca Discovery is performing in the Hospitals of Berlin, Milan, Vienna and London.

in strict seclusion until all danger of an infection has passed.

Sores on Pigs.—J. W., Harmarville, Pa., writes: "I have a sow with five young pigs about a month old, her first litter. When two weeks old, one got a sore on its shoulder, then another one got a sore on its leg, then their eyes began to swell. Two of them, each had an eye swell and burst. They are fat and plump, and sleep nearly all the time. They have a good, warm and clean pen."

ANSWER:—Apply to the sores twice or three times a day a five-per-cent solution of carbolic acid. For the eyes, provided the eyesight is not yet irrevocably destroyed, you may use an eye-water composed of corrosive sublimate, one part, to distilled water, one thousand five hundred parts. If the eye is already destroyed, the five-per-cent solution of carbolic acid will answer.

Chronic Intestinal Catarrh.—S. B., Black Diamond, Cal., writes: "My horse is continually soiled behind by stains running down the legs. He is in apparently good health, with but little to do except an occasional pleasure drive. Can you advise what is best to do to prevent it? His bowels are apparently in good condition."

ANSWER:—In the first place, change the feed, and by way of medicines, some tonic, for instance, small doses of gentiana or even of nuxvomica may be given. The doses of the latter, if given in powder form, is half a drachm, and that of the former about an ounce. The change of food is, however, the main part; but even that remains often ineffective, especially in old horses. Injections of starch into the rectum also may be tried.

Malignant Wart.—C. S., Netawaka, Kan., writes: "I have a three-year-old mare that has a large wart on her foot. It is as large as a walnut. It is situated on the elastic frog, or just back of the upper part of the hoof and on the outside of the foot. It is soft and a bloody-fleshy composition. I think it has been there nearly a year and is slowly growing. I have never treated it at all, thinking it would leave. Several times she has broken it off and it has grown out again. It is beginning to lame her a little. Aside from the wart, the mare is thrifty and doing well."

ANSWER:—Such a malignant wart frequently proves to be an ugly thing. If nitric acid, applied by means of a piece of a surgeon's sponge, fastened to the end of a stick, should not permanently remove it, arsenious acid in the following combination, and properly applied, will: Take two parts of arsenious acid, one part of caustic potash, two parts of powdered gum arabic (genuine) and four parts of water. This, well mixed, will make a thick paste, and one application is usually sufficient. But I have to ask you to have it applied by a veterinarian, or, at any rate, by somebody who is competent to apply such exceedingly dangerous and poisonous substances, because, if not properly applied, your animal will be ruined, and may die.

An Affection of the Respiratory Passages—A Weak Colt.—J. N., North Dorr, Mich., writes: "My driving mare has something the matter with her throat or head. Every time I drive her she seems to take cold and has difficulty in breathing. Then when I drive her again, she will keep coughing till something breaks loose in her throat or head and causes a rattling sound. Then she seems to be all right again for a few days.—I have also a fine colt that was a year old in September last. When he came, he was weak in his front legs and could not stand on them. His front legs are all right now, but he is weak in the hind pastern joints. When he stands in the stable he seems to be all right, but when he walks around, those joints seem to shove out in front, and when he steps, those joints will snap back in their places. His hind legs seem to be a little weak."

ANSWER:—Your mare suffers from some affection of the respiratory passages. What it is, I cannot tell you, because to ascertain the nature of the affection—perhaps some kind of obstruction—requires an examination of the animal. As to your colt, nutritious food, a perfectly level floor in its stable, and judicious bandaging will effect improvement. Whether a cure can be effected, depends upon the degree of weakness and the peculiarities of the case.

Walks on His Toes.—G. S. M., Boonsboro, Va., writes: "I have a three-year-old horse that has an affection of the hind legs and feet which puzzles me. He walks on his toes, especially up hill; stands on his hind toes in the stable, and in walking has a peculiar, outward twist of the hind legs, as if he revolved them on the toes. It seems as if there was a stiffness of the coronet joint, or it may be a luxation of the extensor muscles, or a contraction of the flexors."

ANSWER:—The trouble, as you seem to know yourself, is probably not in the flexor muscles and tendons, but in the extensors. But whether it is more weakness, paralysis or a rupture of one of the extensors or its tendon, that to decide would require an examination, especially if one does not know the history of the case. I therefore have to advise you to

have the animal examined by a competent veterinarian. If you are not too far from Blacksburg, you may consult Prof. Ellis, of the A. and M. college.

Worm Disease in Sheep.—C. P. T., South Royalton, Vt., writes: "About a year ago I wrote about my sheep, that the lambs scoured badly, had a cough, lost flesh and appetite and finally died. I lost seventeen of my best ones and some old sheep, also my best. Your reply was that it was parasites in lung, stomach or liver. This same trouble is among my flock, but not as bad as a year ago. Several of my lambs passed short, flat worms, which looked like strips of white membrane. They cannot urinate, bowels are loose, eyes dull, appetite poor. Some old sheep are affected by it, but not as badly as the lambs; they still cough occasionally. These sheep and lambs had good, sweet pasturage (quite a large timber lot attached through which they ranged), the best of fall feed, and since that failed, plenty of bright, early-cut hay and rowen with grain and roots once a day to the stock sheep, and grain twice a day to fattening lambs. It does not seem to be contagious; no one here has ever heard of such trouble. As I have lost several registered Southdowns, and have more affected, I am naturally anxious for a remedy. I opened several that died last fall, but could find nothing to indicate cause of death. Last spring when sheep affected by this distemper, even slightly, the lambs would die when three or four days old. Is there a remedy and what is it?"

ANSWER:—Besides long worms, your sheep also seem to have tape-worms. Against the former not much can be done. The latter will yield to treatment. Dissolve one part of tartar emetic in forty-eight parts of distilled water, and give each lamb one ounce and each sheep a little more—up to an ounce and a half—of that solution on an empty stomach, and then don't give any food during the next four or five hours. Keep your sheep, but particularly the lambs, away from all wet and swampy places, and especially from stagnant pools of water.

A Sore Foot.—E. E. E., Redding, Iowa, writes: "My three-year-old filly got a scratch on the front foot, just above the hoof on the back part. We supposed that she got it hooked over the barb-wire, as one of the wires was broken. It was not much of a scratch, but it gathered around to the front part of the foot, and mattered clear around from behind to the front on one side. That foot is nearly twice as large as the other one."

ANSWER:—Your description leaves me in doubt whether you have to do with a fistula in the cartilage of the hoof, or simply with a case of grease-heel. It probably is the former. Make a careful examination, and ascertain by careful probing with a flexible (whalebone) probe, whether and where a canal is leading into the interior of the foot. If such is the case, you have to deal with a cartilage fistula, a disease, the treatment of which requires the attention of a competent veterinarian. There are several methods. I have had the best success with the following: First, I prepare corrosive sublimate bougies by mixing one part of finely-powdered corrosive sublimate with one part of gum arabic and two or three parts of water. This makes a semi-fluid paste. I then take twine about one eighth of an inch in diameter, dip it into my paste, which latter may be kept in a test tube, and let it dry. When dry, I dip it in again, and hang it up to dry. This procedure is repeated until my twine is uniformly coated, of sufficient thickness and comparatively stiff. I then cut it into ends of suitable length—say about a quarter of an inch longer than the depth of the fistulous canal. This done, I introduce such an end (bougie) into the fistulous canal, and then bandage the sore foot. The object of this treatment is to destroy the diseased cartilage, and thus make a cure possible. If one application is not sufficient, a second and perhaps a third one must be made. I advise you, though, if you value your animal, to leave the treatment to a competent veterinarian.

FRIDLEY, MINN., Nov. 17, 1890.

I received the pictures, "Christ Before Pilate" and "Christ on Calvary," and would not part with them for One Hundred Dollars.

Mrs. A. HINDLE.

MOORESBURG, PA., Nov. 27, 1890.

I received the picture, "Christ on Calvary," and am well pleased with it. "Christ on Calvary" is the grandest picture of the kind I have ever seen.

Mrs. MARY A. CROSLY.

SALT LAKE CITY, UTAH, Nov. 12, 1890.

I thank you for the picture, "Christ on Calvary." I think it truly magnificent, and with the former one (I received "Christ Before Pilate"), will make a beautiful pair, nicely framed. The work is splendid. The Stamping Outfit also reached me, for which accept my thanks.

Mrs. J. B. HAWKINS.

Our Miscellany.

THERE are 105,000,000 sheep in Australia.

AMERICAN coal is to be introduced into Brazil.

BEECHAM'S PILLS act like magic on a Weak Stomach.

LAST year the government sold 13,000,000 acres of land to settlers.

POUR all the dish-water and soap-suds on the roots of young trees.

LEATHER chair seats may be cleaned by rubbing with white of egg, well beaten.

It will require 58,000 freight-cars to move the stock of wheat in the Red River valley.

A GRAIN of musk will scent a room for twenty years, and at the end of that time will not show that it has diminished in the least.

FORTY thousand miles of railroad have been projected and surveyed and capital subscribed to build in this country during the next two years, but less than half that mileage will be constructed.

OIL may be taken out of any carpet or woolen stuff by applying buckwheat plentifully, and carefully brushing it off after a short time, and putting on fresh until all the oil has disappeared.

AN Egyptian scythe, recently unearthed, is exhibited among the antiquities in the private museum of Flinders Petrie, in London. The shaft of the instrument is wood, supporting a row of flint saws, which are securely cemented into it.

INK stains can be entirely removed by the immediate application of dry salt, before the ink has dried. When the salt becomes discolored by absorbing the ink, brush it off and apply more, wetting it slightly. Continue this until the ink is all removed.

THE surface of the sea is alive with vast swarms of minute organisms, both plants and animals, and the "Challenger" investigations have shown conclusively that showers of these keep dropping, day and night, like a constant rain, toward the ooze of the bottom.

"SPEAKING of brave men," said Colonel Blue-grass, of Kentucky, "there is Colonel Blood, of our town. He's the bravest man I know." "Indeed?" "Yes, sah! Why, sah, the doctor prescribed a glass of water before breakfast every morning, and, sah, the Colonel is taking it without a kick."

"Cheap Lands and Homes in Kentucky, Tennessee, Georgia, Alabama, Mississippi and Louisiana" is the Title of a Pamphlet issued by D. G. Edwards, Cincinnati, Ohio, General Passenger and Ticket Agent Queen & Crescent Route, containing correct County map of these States. Mailed free on application, to any address.

IN sour paste, the milt of a codfish, or even in water in which vegetables have been infused, the microscope discovers animalcules so small that millions of them would not equal the size of a grain of wheat. And yet nature, with a singular prodigality, has supplied many of these with organs as complete as those of a whale or an elephant.

A COMMON SENSE CALENDAR.

The calendars that come in the fall are as numerous as the flowers that bloom in the spring. Many further resemble the flowers in that they come without being sent for, and fade after a very brief existence.

The most sensible and business-like Calendar that we have seen comes to us from N. W. Ayer & Son, Newspaper Advertising Agents, Philadelphia, and bears their "Keeping everlastingly at it" imprint. It is so large and clear that its dates can be easily distinguished across an office, and is printed in a manner to reconcile the most fastidious to its company for a year.

It is sent to any address, postpaid, on receipt of 25 cents.

More dangerous than the profession of a soldier in time of war is the work of a freight brakeman in times of peace. The work is dangerous enough in summer, but when the foot-board on top of the freight-car is covered with snow and ice, "braking freight" becomes more hazardous than any other pursuit in the world. The schoolboys welcome the coming of snow and sleet, for to them it means pleasure. To the brakeman it comes as anything but a blessing, for it means that it increases the chances of his death fifty per cent. Even the most experienced brakeman cannot always guard against a slip, and few there are, new or old, who have not had narrow escapes from a dreadful death. The marvel is that any brakeman comes back from a run alive, when one considers the awful danger of running along the narrow, ice-covered foot-board of a swaying box-car, with no support for the hands and the wind blowing a gale in the darkness.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 320 Powers' Block, Rochester, N. Y.

THE PERFECT MAN.

The proportions of the human figure are six times the length of the right foot. Whether the form is slender or plump, the rule holds good on an average. Any deviation from the rule is a departure from the beauty of proportion. It is claimed that the Greeks made all their statues according to this rule. The face, from the highest point of the forehead, where the hair begins, to the end of the chin, is one tenth of the whole stature; the hand, from the wrist to the end of the middle finger, is also one tenth of the total height. From the crown to the nape of the neck is one twelfth of the stature. If the face, from the roots of the hair to the chin, be divided into three equal parts, the first division determines the place where the eyebrows should meet, the second the opening of the nostrils. A man of good proportions is as tall as the distance between the tips of his fingers when both arms are extended to full length.—*St. Louis Republic.*

A STEER'S MISTAKE.

A Texas steer that got into a panic while being driven through a Kansas town, took after a grocer, but didn't see the man dodge into a doorway. He kept on until he saw a telegraph pole and he made a charge and struck it with such force that his neck, one leg and a shoulder were broken. It is a funny thing that the owner of the steer is suing the grocer for the loss of the animal.—*Detroit Free Press.*

SOME THINGS A BOY SHOULD LEARN.

To swim. To dance. To throw straight. To make a fire. To be punctual. To hang up his hat. To help his mother or his sister. To wipe his boots on the mat. To close a door quietly. To read aloud when requested. To remove his hat upon entering a house. To treat the girls so well that they will all wish he was their brother. Either to sing or to play a musical instrument.—*New York Ledger.*

SAW-MILL FOR PLANTERS AND FARMERS.

Quite a number of years ago there was a very great demand for a saw-mill for farmers' and planters' use, to be driven by their farm engines. The demand for such mills had been small and prices were higher than buyers seemed willing to pay. Appreciating the fact that very many of these mills can be sold, the Lane & Bodley Co., of Cincinnati, designed a mill and advertised same largely at a very low price, resulting in many sales. While this mill is sold at a low price, it is not cheap in any sense, its material and workmanship being of the very best quality and all parts correctly adapted to the work. The reputation of this house has been well established for many years and it is only necessary to mention that they continue to manufacture in large quantities these mills, to attract the attention of our readers.

A GREAT SCHEME.

"Do you know that one of the highest schemes to furnish electric power from water power is soon to be put in operation out our way?" said the Hon. A. C. Brown, of Minneapolis, when I met him in the Hoffman House last evening. The Mississippi river, for a distance of about five miles, between St. Paul and Minneapolis, is full of rapids, and the land on each side of the river is suitable for the erection of manufactories. The idea is to utilize this water power by building a succession of dams in the river—using the water over and over again. This will furnish the power for electric plants that will use the electricity thus produced for street lighting and motor purposes. Henry Villard and several well known eastern capitalists are interested in the movement, and will begin work on the dams as soon as the spring opens.—*New York Herald.*

VARIOUS ROADS TO FAME.

Authorship is not the only road to fame, nor is politics, writes John Swinton in the *New York Sun*. One man in this city has perpetuated his name for three generations, and may perpetuate it for many more, by being the founder of a restaurant. Another man has perpetuated his name by being the inventor of a printing press; another by devising a lead pencil; another by starting a town that has grown up; another by concocting a favorite drink; another by rearing a big house; another by establishing a charitable society; another by building a theatre; another by accumulating a heavy fortune; another by pugilistic feats; another by carrying on like a crank; another by electrical discoveries; another by raising a flower which he called after himself; another by building up a mercantile establishment; another by designing a stove; another by making a bequest to some institution; another by producing a patent medicine; another by constructing a lock; another by vocal accomplishments, and others in many other ways; but perhaps there is not one author in a hundred who writes a book that gives him a reputation that lasts for a year.

PLATINUM and silver can each be drawn into wire many times smaller than a human hair. The former metal has been drawn into wire so fine that twenty-seven of them twisted together could have been inserted into the hollow of a hair; that is, if a human being or a human-made machine could be found minute and precise enough for such a delicate undertaking.

AGRICULTURE IN ANCIENT CHINA.

In 1100 B. C. the prime minister of the Emperor Wou-Weng, Tchou-Kung, constructed *norias*, or hydraulic machines of simple design and working, by which water was raised to a height to which it had never been carried before, and made reservoirs and canals for irrigation. Water was conducted by means of machinery from the wells to the dry hill tops, and water provision was assured for times of drouth. Agriculture, in consequence, flourished. Other measures of Tchou-Kung comprised the promulgation of laws respecting the boundaries of properties and the prevention of trespasses. The fields were divided into squares called wells, from their resemblance to the Chinese character signifying a well, surrounded and furrowed by ditches so arranged that eight farmers, each tilling his own tract, united in cultivating the ninth interior tract, which belonged to the state, and the produce of which paid their rent.

The system succeeded to a marvel. Each tenant was proprietor of about fifteen acres, the whole product of which belonged to him, while the state was really proprietor of the whole, and had, as a landlord, the income of the ninth tract. Besides this, each farmer had some 3,350 square metres of ground for his farm-yard and his mulberry trees. Thus he always enjoyed a surplus of provision, of pork and poultry for food and silk for clothing. No one at this time was richer or poorer than another, but a complete social equality existed, and every one, they say, was satisfied.—*Gen. Tchoung Ki Tong, in Popular Science Monthly.*

HORACE GREELEY'S HAM.

After the *New York Tribune* had moved its offices to Spruce and Nassau streets, in the old building, Mr. Rhoades came down one morning about nine o'clock and saw a big ham lying on the iron heater, writes a correspondent. Franklin J. Ottarson, the city editor, came in and said:

"Dave, whose ham is that?"

"I don't know, Ot," was the reply. "I only know that when I came into the office that ham was there."

"Give it to me?" said Ot.

"Nothing of the kind," said Rhoades. "If you want it, come around and get it."

Ottarson promptly went around and took it. At twelve o'clock Mr. Greeley came around and said:

"Dave, where is my ham?"

"Your ham? Get up to Ottarson's as quick as you can, and probably you will find it in the pot boiling."

"Well, confound you," said Mr. Greeley, using more vigorous language, however. "Why did you give Ottarson that ham?"

"He took it," was the reply. "Ottarson came down and asked for the ham. I wouldn't give it to him and he took it."

Next day Mr. Greeley said: "Confound you, Rhoades, you gave Ot that ham."

"Nothing of the kind."

"Ot says you did."

"He's not telling the truth."

Shortly afterward Mr. Greeley unburdened his mind to his associates in words something like these:

"You lot of thieves! I'll have to pin my shirt on my back if I don't want to lose it among you."

BUT WHAT WOULD PARADISE BE WITHOUT HER?

Lady lecturer on woman's rights (growing warm)—Where would man be if it had not been for woman? (After a pause, and looking around the hall)—I repeat, where would man be if it had not been for woman?

From the gallery—"E'd be in Paradise, ma'am.—*The Jester.*

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Sows CLOVER, TIMOTHY, RED TOP, and all kinds of GRASS SEEDS. Sows any quantity—cheaply, accurately—in wet, dry, and windy weather. Weight 40 lbs. O. E. THOMPSON & SONS, Send for circulars. No. 12 River Street, YPSILANTI, MICH.

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Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Smiles.

TO ELISE; OR, WHY WE DON'T MARRY.

Your foot is the tiniest that trips, love,
Through the maddening maze of the waltz;
Two blossoming buds are your lips, love,
Your eyes say your heart is not false.

Your hands are so dainty and white, love,
Your figure so wondrously fine,
That I'm tempted almost, but not quite, love,
To say, I adore you!—be mine!

But no! there's a frightening fear, love,
That will not allow me to speak.
You're spending three thousand a year, love;
I'm making twelve dollars a week.

—Life.

MUNCHHAUSEN IN KANSAS.

A DAKOTA man and a Kansas man were sitting on cracker boxes at the grocery store, and the Dakota man had just told a story about the big beets that were raised on the Red river. It was so large a story that a flour barrel near the stove coughed suspiciously and the Kansas man whittled off a larger slice of pine than usual from the corner of his box. Finally he said, in a pensive tone, as if calling up the details gradually out of a roomy past:

"I remember when I went to Kansas in the spring of '68 it was awfully dry, but I had great faith in the productiveness of the soil, and I put in eighty acres of the finest seed wheat you ever saw. It didn't rain all summer, and not a spear of that wheat came up.

"Well, gentlemen I can tell you I felt pretty sad. But I managed to scrape through the winter and the next spring I sowed the same piece of land to barley. But it didn't rain a drop all that year, and not a blade of that barley came out of the ground.

"You may depend upon it, I felt pretty nigh discouraged. But with the help of my wife's relations I pulled through the winter. I had great faith in the soil, and the next spring I sowed the same piece of ground to oats. If you will believe me, not a drop of rain fell all summer and the oats never came up.

"That was the summer of '70. Well, in that fall it began to rain, and it *did* rain. The flood was a tributary to that rain. It kept right on raining all spring, and in July I had the finest crop of wheat you ever saw—the wheat that I sowed in '68, you understand.

"I harvested it and just after it was all in it began to rain again, and the next summer the finest crop of barley you ever saw came up, the barley that I sowed in '69. It was a fine crop and I paid off all my remaining debts with it.

"The next spring we had a fine rain, and the oats that I planted in '70 began to come up, and—"

The Kansas man looked up and saw that he was alone. Even the flour barrel had edged away behind the stove, and the Kansas man smiled as he said to himself: "The soil of Kansas is remarkably productive."

ON THE TRAIN.

"Excuse me, sir, but that open window is very annoying," said Blossom to a drummer sitting by the open window in a railway train.

"I'm sorry, but I'm afraid you'll have to grin and bear it," said the drummer.

"I wish you would close it, sir."

"Would like to accommodate you, but I can't," was the reply.

"Do you refuse to close that window, sir?"

"I certainly do."

"If you don't close it, I will."

"I'll bet you won't."

"If I go over there I will."

"I'll give you odds you won't."

"I'll ask you once more, sir, will you close that window?"

"No, sir, I will not."

"Then I will, sir," said Blossom, getting on his feet.

"I would like to see you do it."

"I'll show you whether I will or not, sir," placing his hands upon the objectionable window.

"Why don't you close it?" said the drummer, as Blossom tugged at the window.

"It—appears—to be stuck," said Blossom, getting red in the face.

"Of course it is. I tried to close it before you came in."

WHAT DID THE PREACHER THINK?

Over in Jersey City there is a very bright little girl of six years, whose father is a Presbyterian, with an occasional fondness for the bottle. They live a few doors from the church. A few Sundays ago the parents went to the communion service, and baby was left at home to escape the long ceremony. It was a warm day, and "Coronation," the usual closing hymn, floated out through the open windows. The good deacon took the pastor home to dine with him. When grace had been said little Bessie remarked:

"I knew you was comin' home, papa."

"How did you know, little one?"

"'Cause I heard the song."

"What song?" asked the preacher.

"Oh, you know, the one where you say 'bring forth the royal demijohn.'"

PROFONDEST DEPTHS.

They stood on the American shore and gazed in wonder-struck silence at the majesty and beauty of Niagara. The personification of feminine grace and tenderness, she leaned confidently on the arm of her husband—her ideal of manly strength and chivalry. The glowing sunbeams danced in the spray that rose like fair mountains before their gaze, radiant with the gorgeous hues of the rainbow, and the falling waters sounded their eternal monotone in the ears of the listeners, whose hearts beat responsive to its deep pulsations. Nature's own voice spoke to them and stirred the profoundest depths of their being.

The young husband pressed the little hand that lay confidently on his arm, and smiled at the sweet face upturned to his.

"Gwendolen," he said, the rapture of his emotions thrilling his voice and shining out through his dark eyes, "does it stack up to your expectations?"

"Launcelot!"—and her eyes seemed about to overflow with excess of pent-up feeling—"it's just the cutest thing I ever struck."

KNEW IT ALL.

Two men were standing outside a Broadway jeweler's window recently, admiring the gorgeous display of glittering jewels that lay before them, and criticising such as failed to suit their fancy. Presently one of them, pointing to an object in a red plush tray, said:

"Just look at that scarf-pin representing a fly. Anyone can tell that's not real."

"Well, I should think so," answered his friend. "Who ever saw a common fly with such a bright appearance? Why, it makes me weary when I think that the jeweler who produced that fondly hoped that some one would purchase it to deceive his friends. If I saw that on a man's scarf I could tell directly that it was an enameled imitation, and an unartistic one at that."

At that moment the object of the critic's condemnation moved across the tray, flew in the air and vanished. The two men looked each at the other, gasped and moved away without a word.—*Jeweler's Weekly.*

WANTS ONLY HIS OWN.

A Detroit lawyer received a letter from Texas the other day on which the postage stamp was of an issue current fifteen years ago, and on the envelope of which there was a request to return if not delivered sometime pretty soon." The contents read:

"Sometime in the year 1700, a man by the name of Hooten, took up two acres of ground in your town. He is dead. I am his heir. I want to find out all about it. I want you to search the records and send me all the papers and information you can. If them two acres is there yet I want 'em. If not, I don't. I only want what belongs to me as his lawful heir. Enclosed you will find twenty-five cents in stamps to pay for your trouble. I am well. Answer as soon as possible.—*Detroit Free Press.*

MEDICINE WANTED.

An old war veteran limped into a shop one day and said to the druggist.

"I want some medicine."

"What kind of medicine?"

"Oh, some sort of vermifuge, I suppose."

"Where does the seat of your difficulty seem to be?"

"In my wooden leg, mister. It's gettin' all worm-eaten."

A HOME THRUST.

"My wife is afraid of a mouse," said soaker.

"That doesn't prove her a coward," said Miss Lightly. "She is possessed of more courage than most women, and has proved it."

"How, pray?"

"By marrying you."

JOYFUL NEWS.

Customer—"I want a pound of quinine and two quarts of whiskey."

Druggist—"I'm sorry to say, sir, that we're just out of quinine."

Customer (brightening up)—"Make it three quarts of whiskey."

A TERRIBLE THREAT.

Borsleigh—"Ha! Smart, if you doubt my word I'll slay you with the jawbone of an ass."

Smart—"Indeed! Are your talking powers so great as that?"—*Princeton Tiger.*

RETURNING THE COMPLIMENT.

Jack Dedbroke—"Ah, Miss Somers, you look as fresh as a rose this bright morning."

Miss Somers—"You are fresher than that, Mr. Dedbroke."—*West Shore.*

HOME STUDY. BOOK-KEEPING, BUSINESS Forms, Penmanship, Arithmetic, Short-hand, etc., thoroughly taught by MAIL. Circulars free. Bryant & Stratton's, 449 Main St., Buffalo, N. Y.

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Such as Wind and Pain in the Stomach, Fullness and Swelling after Meals, Dizziness, and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blisters on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c.

THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES.


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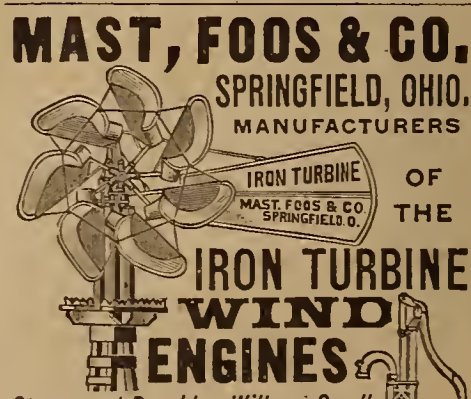
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And balkin' cause the earth don't sha
At every praucin' step they take.
No man is great till he can see
How less than little he would be
Ef stripped to self, and stark and bare,
He hung his sign out anywhere.

My doctern is to lay aside
Contentions and be satisfied;
Just do your best, and praise or blame
That follers that counts, just the same
I've allus noticed great success
Is mixed with trouble more or less.
And it's the man who does the best
That gets more kicks than all the rest.

JAMES W. RILEY.

THE LITTLE ONE'S REBUKE.

HERE is a woman in this city whose wealth, position and goodness fill her life with social and charitable occupations, says the New York Times. But for more than six months it has been impossible to procure her presence anywhere on Saturdays. She has told one or two intimate friends the reason:

"It was one day in the latter part of March that my little daughter, Constance, who is twelve years old, came into my room as I was hurriedly dressing to drive to a directors' meeting of one of the several charities in which I am interested. Her birthday had been the day before, and she had a game, one of her presents, in her hand.

"Oh, mamma," she cried, full of eagerness, 'this is the loveliest game; do try it with me.' Her request, in my haste and absorption, seemed in the highest degree trivial to me. 'Nonsense, Connie, you know I cannot,' I replied, rather sharply; 'this is board day at the hospital, and I am shockingly late now.'

"I was standing in front of the mirror and I saw in the glass how her face fell and the light died out of it. 'I wish,' she said, wistfully, 'you would sometimes have a day with me, mamma.' The child's speech went through me like a knife. I had never received so stinging a rebuke. Was it possible that in the pursuit of other duties I was neglecting the one that should be chief? My drive to the hospital that morning was full of serious introspection, and Connie has had her Saturdays ever since."

WOMEN PHYSICIANS FOR INSANE WOMEN.

The proposition which is pressed with great vigor by the Women's Educational and Industrial Union of Buffalo, that in every hospital and asylum under state control in this state there should be at least one educated woman physician, is so essentially reasonable and so justified by experience that it is impossible to see upon what ground it could be opposed. Legislative action upon the subject has been taken in Massachusetts, Pennsylvania and Ohio. In ten other states—Maine, Michigan, Minnesota, Indiana, Illinois, Iowa, Nebraska, New York, California and West Virginia—women physicians have been voluntarily appointed by superintendents or trustees. There are now more than twenty such physicians serving in state institutions.

New York legally sanctions the education and practice of women physicians. Is there any good reason why she should not provide by law that every unfortunate insane woman under the care of the state shall have the services of an expert of her own sex if she desires it? Surely the question carries its own answer. It would be thought a very hard dispensation that insane men should not be attended by men physicians if they so desired. The reasons in the case of both sexes are obvious and familiar. The only regret and wonder is that a provision so humane and natural and consoling for these unfortunate wards of the state has not yet been made law.

REAL AND IDEAL.

Sometimes there are living beings in nature as beautiful as in romance. Reality surpasses imagination; and we see breathing, brightening and moving before our eyes, sights dearer to our hearts than we ever beheld in the land of sleep.

Recent Publications.

NITRATE OF SODA FOR MANURE.—Some valuable and timely information is contained in a 96-page treatise on the "Use of Nitrate of Soda for Manure," and the best mode of its employment, written and published by Mr. Joseph Harris, M. S., of Mooreton Farm, Monroe county, N. Y., the author of "Walks and Talks on the Farm," "Talks on Manures," and various other standard works. Mr. Harris is the man who has first urged the use of nitrate of soda for manurial purposes in America with energy and persistence. For this service alone, the progressive gardener of the day, who is now enabled to give to some of his crops, with the aid of nitrate of soda, a luxuriance seldom obtained except on new and excessively rich soil, is under great obligation to him. The work treats also on the use of nitrate of soda for general farm crops and it will prove interesting to the farmer as well as the gardener, especially since the tendency of the times is towards cheapening this manurial substance and towards bringing it within the reach of everybody. The price of the little work is only ten cents, and everyone at all interested in progress in farm and garden matters should get a copy and study it.

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ARKANSAS.—(Fayetteville) Bulletin No. 15, December, 1890. The action of some new insecticide on the cotton worm.

CONNECTICUT.—(New Haven) The potato scab. Proleids of the oat kernel. Milk testing. **GEORGIA.**—(Experiment) Bulletin No. 9, (special) October, 1890. Potash as fertilizer.

INDIANA.—(LaFayette) Bulletin No. 33, October, 1890. (1) Small fruits. (2) Entomological notes. (3) The absorptive power of soils.

CALIFORNIA.—(Berkeley) Bulletin No. 89. Distribution of seeds and plants.

MAINE.—(Orono) Annual report for 1889. Part III.

MASSACHUSETTS.—(Amherst) November 1890. Analyses of commercial fertilizers.

MICHIGAN.—(Agricultural College P. O.) Bulletin No. 67, October, 1890. Fruit testing at the South Haven sub-station. Bulletin No. 68. The Jack pine plains. Milk. Ensilage. Fertilizer analyses. Bulletin No. 69, November, 1890. Herding steers of different breeds.

NEW JERSEY.—(New Brunswick) Bulletin No. 75, November 1890. Insecticides, and how to apply them.

NEW YORK.—(Geneva) Bulletin No. 24, October, 1890. Experiments with strawberries. Bulletin No. 25, November, 1890. The New York state fertilizer control and fertilizer analyses.

OREGON.—(Corvallis) Bulletin No. 6, July 1890. Examination of cattle foods.

RHODE ISLAND.—(Kingston) Bulletin No. 8, September 1890. Soils and fertilizers.

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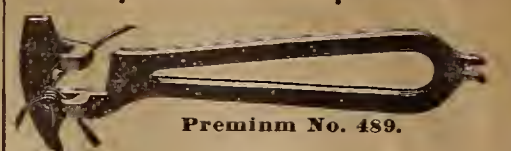
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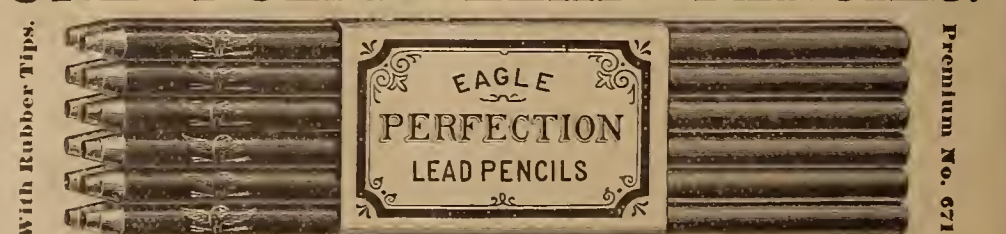
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CONTENTS.

Dear heart.	Happy new year.	Le Petre's hornpipe.	Petronella.	Smith's hornpipe.
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Cincinnati hornpipe.	Flowers of Edinburg.	Kathleen Mavourneen.	Shunster's hornpipe.	
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- (8) *James Parton, M. W. Hazeltine and Oliver Dyer* (author of "Great Senators") contribute articles of interest.

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FARM & FIRESIDE.

4 EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XIV. NO. 9.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, FEBRUARY 1, 1891.

TERMS 50 CENTS A YEAR.
24 NUMBERS.

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Current Comment.

REFERRING to a statement made not long ago in these columns, that any currency not redeemable in gold and silver coin is a failure, a correspondent asks what the greenbacks are redeemable in. By the manner of his communication he implies that they were not redeemable in coin. Well, what is a greenback, anyway? Look at it carefully the next time you get hold of one. We do not mean to insinuate that money is a scarcity with you. We hope that you are more fortunate than most people at the present time. But in handling currency, you will find that most of it in circulation is gold and silver certificates and national bank notes. But read the next one you get hold of and you will find that it is simply a promise to pay money. What kind of money? The greenback or United States Treasury note is a note issued by the government to pay, on demand, the sum of money named on its face. It is not real money, but credit money, a promise to pay money. And the money it promises to pay is the money that was in use at the time it was issued. The money in use was gold and silver coin when the United States Treasury notes were issued. The money they promised to pay is gold and silver money, not iron money, or copper money, or fiat money.

To redeem these promissory notes of the government, the national treasury holds in reserve \$100,000,000 in gold and silver coin. Three times that amount of notes are in circulation, but the credit of the government is so high that they are at par. There was a time when the credit of the government was not so good and they were worth only forty cents on the dollar. Like ordinary notes of hand given by individuals or business firms, they rest on the solvency of the parties making them. With the important exceptions of being especially prepared in convenient form for circulation and to guard against counterfeiting, and issued under special national laws, greenbacks are like ordinary notes of hand.

National bank notes are also credit money. Gold and silver certificates are representative money. They are certificates of gold and silver on deposit in the treasury of the United States, payable to the holders of the certificates on demand. They represent the coin in circulation, serve as money and are redeemable in coin.

The same correspondent, referring to the sub-treasury scheme, asks why a mortgage on land would not be better and a safer security to the government than anything else. It is not a question about the quality of the security at all. It is whether or not the government shall

make a special privileged class of the owners of real estate and loan them money at a low rate of interest.

THE free silver coinage bill passed by the senate provides "That unit of value in the United States shall be the dollar, and the same may be coined of 412½ grains of standard silver, or of 25.8 grains of standard gold; and the said coins shall be legal tender for all debts, public and private. That hereafter any owner of silver or gold bullion may deposit the same at any mint in the United States, to be formed into standard dollars or bars for his benefit, and without charge; but it shall be lawful to refuse any deposit of less value than \$100, or any bullion so base as to be unsuitable for the operations of the mint." The bill also provides for the issue of coin certificates of denominations of not less than one, or more than one hundred dollars, and that such certificates shall be redeemable in coin of standard value.

Section 4 of the bill provides "That the certificates provided for in this act, and all silver and gold certificates already issued, shall be receivable for all taxes and dues to the United States of every description, and shall be a legal tender for the payment of all debts, public and private."

There is a probability that this bill or one equivalent to it may become a law within a year. As to the effect of such a free coinage act there is a diversity of opinion. If it will enhance the value of silver so that it shall be on a par with gold, then well and good. If the value of silver does not increase, and the government stamps the dollar mark on eighty cents worth of silver, then gold will disappear from circulation, and this country will descend to a place alongside India, China and other silver standard countries. The bill does not confine free coinage to the bullion produced in this country, but throws the mints open to the world. If this bill should pass and result in giving this country depreciated money, the speculators and silver kings will have a bonanza at the expense of the farmers, wage earners and merchants of this country. There is another class that want a depreciated currency for the purpose of having their debts scaled down. There are many who honestly believe that free coinage will bring silver up to par with gold and benefit the country. The only way to settle the question seems to be to make the experiment. It is a risky experiment, but it is the only thing that will satisfy the large and increasing number of advocates of free, unlimited silver coinage.

A BILL has recently been introduced into the Ohio legislature to do away with the double taxation of mortgaged property. The purpose of the bill is most commendable. This double taxation is an unjust burden of the most grievous kind, and must be carried by those least able to bear it.

Under the constitution of Ohio, laws must be passed taxing, by a uniform rule, all moneys, credits, investments in bonds, joint stock companies, or otherwise; and also all real and personal property according to its true value in money, excepting school, church and public property, and personal property to an amount not exceeding two hundred dollars for each individual. Under the laws mortgages are taxed as well as the property mortgaged,

and the result is double taxation. The tax on the mortgage is paid by the holder, but he covers it by increasing the rate of interest, and the holder of the mortgaged property really pays both the tax on the mortgage and the tax on the property. If the tax is two per cent, the true rate of interest is increased by that amount, and the borrower, the one least able must pay it. Whenever property and the mortgage are both taxed, there is double taxation, and all of it paid by the borrower.

Without an amendment to the constitution this double taxation can be avoided only in a roundabout way. Neither the mortgage or the property encumbered can be exempted. So in order to remove the injustice to the borrower, it is proposed to have the amount of tax paid each year on the mortgage, indorsed on the note as a partial payment.

The object is to relieve the borrower of an unjust burden and to compel the lender to really pay the tax. But the plan will not work that way unless the lender is prevented from raising the rate of interest to cover the indorsement, just as it has already been raised to cover the tax. If not prevented, the lender will advance the interest and the borrower will not be relieved of double taxation, but will simply be compelled to make an annual partial payment on the mortgage note, which might not be satisfactory either to the lender or himself. For the proposed law to be effectual it must be supplemented by something that will prevent the rate of interest from being advanced. It is certainly not the spirit of the constitution, that the same property should be taxed twice, either directly or indirectly. But if there is no other way to avoid it, let the constitution be amended.

THE great American Harvester Company, that was the wonder and the talk of the country for a few weeks, has gone out of existence, and there are very few mourners. The reason given for abandoning the combination is that it ran afoul of the laws against trusts in several states. The harvester company was not a trust, but a joint stock company. It was apparently a more powerful monopoly than a trust. But the laws in some states are comprehensive enough to forbid corporations from holding stock in another corporation for the purpose of forming a monopoly. The harvester combine fell within the range of these laws, and on the advice of eminent legal counsel the organizers abandoned it.

The organizers have stoutly denied that their purpose was to advance the price of machines, but maintained that their object was to legitimately increase their profits by decreasing the cost of production and distribution, and to ultimately lower the price of machines to the farmer. Farmers refused to be convinced that the object of the combine was not to raise prices, and there was a steadily increasing hostility against it. The ability of a great monopoly to lower cost of production is not questioned; but its willingness to ever voluntarily give the purchasers any benefit of such reduction is doubted. When a monopoly shares such benefits with the consumers, it is a benefit to the community. A well known political economist truly says: "There is every indication that we are to see new developments of the power of aggregated capital to serve civilization, and that the new

developments will be made right here in America. Joint stock companies are yet in their infancy, and incorporated capital, instead of being a thing which can be overthrown, is a thing which is becoming more and more indispensable." Trusts and monopolies are a power for good or evil. We are just now in that stage of the development of civilization when it is wholly within the power of those in the combine to absorb all the benefits to be derived from it, and also to oppress the community by advancing prices, and amass great and sudden wealth at its expense. When the time comes for the benefits to be distributed fairly, a trust will be a blessing instead of a curse.

THE Alliance and other farmers' organizations that took such an active part in politics last fall, have an important work before them now. It is time to get ready for the spring elections. Reform in politics begins at home. If these organizations are in earnest and intend to keep the farmers' movement going, they will not neglect looking after the election of local officers. It is within the power of the farmers in most communities to combine, go into the primaries, and nominate the candidates of either of the old parties. It will not be necessary in very many cases to put new tickets in the field. An organized movement will in many cases secure the nominations in the dominant party. If that fails, then try the minority party. If both fail, put an independent ticket in the field. Determined action on the part of the farmers will soon bring either one or the other of the old parties to terms. Above all, let not the nominations go to the broken-down political hacks and party sore-heads who are now cultivating the political field so industriously, and trying to take advantage of the farmers' movement to work their way into office.

IN response to a demand from the farmers, expressed in a resolution adopted at the formation of the Farmers' Union last summer, a bill has been introduced into the Ohio legislature providing for the election, by the people of the state food and dairy commissioner. As the office is now filled by appointment, it is usually given as a reward for political party services. And it is not such a difficult matter for those interested in not having the food and dairy laws enforced, to influence the appointment in their favor. The farmers of Ohio are now asking themselves what is the use of having these laws if they are not enforced. It is not absolutely certain that it would be better to have the office filled by election than by appointment, but they would like to try it.

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FARM AND FIRESIDE.

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Our Farm.

COMMENTS ON STATION BULLETINS.

BY JOSEPH (TUSCO GREINER).



FERTILIZER CONTROL.—
In the year just
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state has enacted a
seemingly good law,
curiously entitled
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tection and educa-
tion of farmers and
manufacturers in the purchase and sale
of fertilizers." The director of the New
York State Agricultural Experiment
Station, Dr. Peter Collier, Geneva, is
charged with the enforcement of the
provisions of this act. The object of
the law is simply to require that the
fertilizers offered for sale shall contain
such ingredients and in such proportions
as the manufacturers claim. No standard
is prescribed by the law for the composi-
tion of a commercial fertilizer. Each man-
ufacturer makes his own standard for
each brand, the guarantee analysis show-
ing what that standard is. The law pro-
poses simply to see to it that the man-
ufacturer shall keep his goods up to the
standard set by himself.

The act requires of the manufacturers
(1) That they attach to each package of
fertilizers a guaranteed analysis; (2) That
they, between the first and twentieth day
of July of each year, furnish to the di-
rector of said station, a list of the com-
mercial fertilizers they manufacture or
offer for sale for use in the state, with the
names or brands under which they are
known on the market, and the several per-
centages of nitrogen or its equivalent, of
ammonia, of phosphoric acid, soluble and
insoluble, and of potash, either single or
combined.

Dr. Collier's duty is to collect, through
his agents, samples of the different fertiliz-
ers and have these samples analyzed. If
the analysis shows a deficiency of more
than one third of one per cent nitrogen,
more than one half of one per cent avail-
able phosphoric acid, or more than one
half of one per cent of potash soluble in
distilled water, the manufacturer is liable
to prosecution.

"Every person, firm or corporation
violating any of the provisions of this act
shall, upon conviction thereof, for the
first offense, be punished by a fine of not
less than fifty dollars, nor more than two
hundred dollars, and for the second
offense by double that amount, at the dis-
cretion of the court."

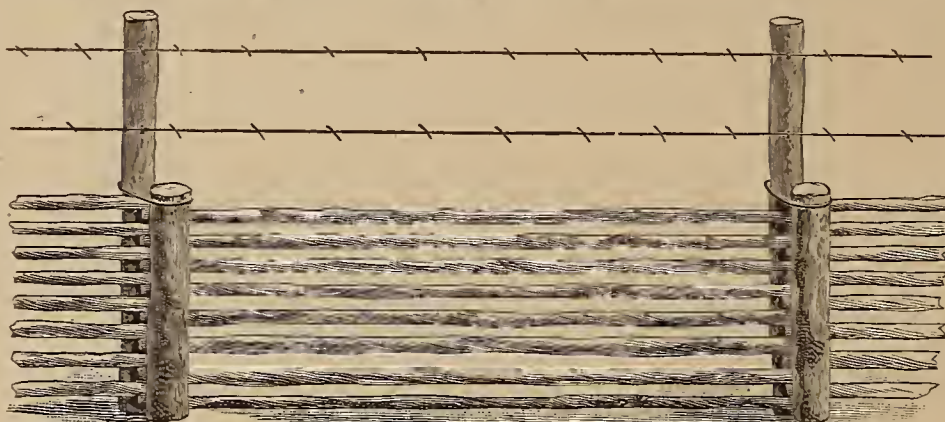
There can be no doubt that such a law
must act as a wholesome restraint to fer-
tilizer manufacturers. While the penalties
for violations are not so very severe, I im-
agine dishonest manufacturers and deal-

ers would stand in considerable fear of
legal proceedings, as such would naturally
tend to hurt their reputation and diminish
their sales. Just for this reason I would
like to see a similar law enacted in every
state. I cannot understand, however,
why there should not be uniformity in
the form of analysis. Why allow this
equivalent in ammonia in place of simple
nitrogen, and why potash either single or
combined? The farmer is not any too
familiar with chemistry, and the compar-
ison of the different values of fertilizers
should be made as easy as practicable for
him. If information of the source of plant
food elements is thought desirable, let it
be something like this: Nitrogen (in am-
monia); nitrogen (in nitrates); nitrogen
(in organic matter); potash (as sulphate);
potash (as muriate), etc., as the case may
be.

A subscriber of FARM AND FIRESIDE
asks me whether the buyer can collect
damages in a civil suit from the man-
ufacturer, if his fertilizer falls below its
guaranteed analysis or commercial value.
I should think he could if he is able to
prove the facts. This latter might be
feasible in case the manufacturer has
been previously convicted for the same
offense in connection with the same brand
of fertilizer, in an action brought by Dr.
Collier. Otherwise it would be difficult,
if not almost impossible, and in any case
I would rather suffer the loss than go to
the expense of fighting the manufacturer
single handed.

Bulletin No. 25 (new series), of the New
York Agricultural Experiment Station,
which contains a copy of the mentioned
law, also gives us the promise of the pub-
lication of a number of bulletins giving
information on the principles underlying
the use of fertilizers; description and
sources of fertilizing elements; economi-
cal purchase and rational use of some
fertilizing elements; prices of raw mate-
rials, etc.

MORE NEW INSECT REMEDIES.—Bulletin
75, of the New Jersey Agricultural College



RAIL AND WIRE FENCE.

Experiment Station, gives some interest-
ing notes on "Insecticides and how to
apply them." Spraying, both for insects
and fungi, has now become a generally
recognized necessity among fruit growers
and gardeners, and the question whether
to use Paris green or London purple for
insects, seemed to be all settled in favor of
the former. I have just been among the
fruit growers of Ontario, Canada. Many
of them spray not only apple and pear
trees, but also plum and cherry trees with
Paris green. They find it effective against
codling moth, curenlio and leaf eaters
generally, and if properly diluted (two
ounces of Paris green in forty gallons of
water), no injury to the foliage has been
observed by its application to any of these
trees. The entomologist of the New York
station, however, advises the use of
London purple in the proportion of one
pound to two hundred gallons of water,
with a pail or two of milk of lime added
to the mixture. This addition of lime
renders the soluble arsenic insoluble,
changing the acid nature of the mixture
to an alkaline one, and thus prevents in-
jury to the foliage. We should remember,
however, with what emphasis some of
our great authorities declared in favor of
London purple only a few years ago, and
these same authorities now speak just as
emphatically against it. The fact remains
that London purple is variable in strength
and perhaps composition and while
Paris green applications, properly made,
seem to be safe and effective, it would be
wise to go slow on changing again to
London purple. This matter should be
more fully tested before the general

grower should be induced to take further
risks.

The bulletin recommends the Cyclone
and Nixon nozzles for applying liquids in
a fine spray. The Cyclone with the "Ver-
morel" modification for clearing the
nozzle of obstructions, is the most widely
applicable for spraying low plants and
bushes, like cabbages, potatoes, currants,
blackberries and others.

Potash salts, especially kainit, have
been found to possess very valuable in-
secticide properties. A solution of one
ounce of kainit in one pint of water,
killed wire worms and cabbage maggots
in soil impregnated with the solution.
Rose bushes infested with plant lice were
speedily cleared of the pest by spraying
them with the same solution. In no case
was any injurious effect on plants ob-
served. Muriate of potash of the same
strength was sprayed on some greenhouse
camelias badly infested with mealy bugs.
It killed all the insects without damage to
the plants. It also proved promptly effec-
tive for the rose-leaf roller, but injured the
foliage and flowers of Wisteria, the
younger leaves of maple and grape and
the finer kinds of roses.

Kainit seems preferable to muriate, as
acting more effectively on insects and not
injuriously on plants. For general use on
plants it is not to be recommended, but
more especially for underground pests.
The best method of application would be
by broadcasting in fertilizing quantity
before or during a rain, so as to
carry the material into the soil at once.
In corn fields infested with grubs or wire
worms, the application should be made
before planting. Where it is to be used to
reach root lice, it should be used when the
injury is beginning. When strawberry
beds are infested by the white grub, the
application should be made when cultiva-
ting or before setting out.

Tobacco has long been used for the de-
struction of insects. The New Jersey en-
tomologist prepared a stock, by making a
decoction and boiling it down so that a

pint of the liquid contained all that could
be gotten out of one pound of stems. One
pint of this stock in one gallon of water
applied to potatoes badly infested by the
flea beetles, checked injury at once and
killed or drove away the beetles. It re-
mained effective as a repellent for several
days, until after a heavy rain. The beetles
returning again, a decoction was made
with one pound of "nicotiana" (coarsely
ground tobacco) to one gallon of water,
first steeping in two quarts of boiling
water and then adding enough more to
make up the gallon. The success was as
marked as before and the plants were not
again troubled. Samples of the decoction
handed to others for use against the same
pest, were reported equally effective, and
the universal addition was that the plants
treated were the finest in the patch. This
is probably due to the fertilizing effect of
the tobacco.

The flea beetle has become a real danger-
ous pest in recent years, and if we can
succeed in driving it away with tobacco, it
is a most important fact; and I know of
no better use that could be made of every
pound of tobacco that is grown than to
kill insects with it. It surely is better and
more profitable than to have it kill
people's nerves. I have used tobacco dust
with some effect, both for the flea beetle
and the yellow-striped cucumber beetle.
I noticed that a handful of the dust,
thrown into the heart of a cabbage or
cauliflower plant badly infested with flea
beetles, drove them away quite quickly.
I do not think it killed a single one, how-
ever, as the pest only seemed to congre-
gate in larger numbers on plants not so

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treated. For the cucumber beetles I ap-
plied it as a heavy dressing around the
plants of each hill, covering the ground to
the depth of perhaps an inch. Here again
the dust proved its repellent powers, and
the plants suffered almost no injury from
the otherwise so destructive pest.

The same bulletin also speaks of naph-
thaline as an insecticide worthy of further
tests. The results of my trials in hot-beds
last year, where the pure naphthaline was
thickly scattered among the plants and
the air kept impregnated with its vapor,
gave no indication that its presence in any
way inconvenienced either the insects (and
there were plenty of flea beetles) or the
plants. The presence of a toad or two,
however, proved very effective against the
insects and cleared the beds in an aston-
ishingly short time.

RAIL AND WIRE FENCE.

Mr. D. G. Hatcher sends a description of
a good and cheap fence, which is well
shown by the accompanying cut. Let the
taller posts stand about five feet out of the
ground and the shorter ones two and a
half feet. Wire the top of the short post
to the tall one. Put rails between the
lower posts, and run two wires on the
taller posts.

THE PRODUCTION OF HYBRIDS.

I was much interested in the article by
D. B. Wier entitled, "Hybridity in Fruit,"
in the last number of the FARM AND FIRESIDE.
While I cannot agree with some of
the sweeping assertions there made, I am
glad that attention is again called to this
subject and in so thoroughly a suggestive
manner.

Cross breeding and hybridization are
among the most important resources in
horticulture. The former takes place in-
stantly in nature and has the effect of
repressing variation, or in other words,
tends to prevent varieties from becoming
species. As a rule, it is only varieties of
the same species that interbreed freely and
reciprocally. On the other hand, there
seems to be few closely related species
between which fertilization cannot be ef-
fected by skillful management. This
crossing of species, whether they be
closely allied or more remote, or whether
we use the original form in each, or a
variety of the same, produces, when suc-
cessful, what is called a hybrid.

These are usually the result of man's ef-
fort and do not play a very prominent part
in nature. The most characteristic feature
of hybrids where we usually find a combi-
nation of the qualities of both parents, is
a very low degree of reproductive power.
In the animal kingdom nearly all well-
known examples of hybridity are sterile.
Among hybrid plants we often find an ab-
sence of fertility. Self or close fertiliza-
tion and remote cross fertilization pro-
duce the same effect.

Observation and experiment have shown
that the sterility of hybrids, where it oc-
curs, is sometimes owing to the abortive
character of the stamens, little or no per-
fect pollen being produced. Many hy-
brids which cannot be self-fertilized may

be readily successfully fertilized by the pollen of one or the other parent.

The following experiments in cross fertilization were made at the Ohio State University last spring, this work being one of the subjects of study of the advanced students in horticulture. Various crosses were attempted between different well-marked varieties of the currant and also between different varieties of the gooseberry. These crosses were entirely successful, the fruit developing perfectly. The cross-bred fruit did not show any particular effect of the pollen either in general or specific characters, although varieties that were widely distinct in shape, size and color were inter-bred. It remains to be seen what the seeds of these crosses will produce. To the Crandall currant was applied pollen from the Downing gooseberry, but this was a failure. The failure occurred, not because the cross is an impossible one, but for the simple reason that the single Crandall currant bush growing upon our grounds, although it bloomed freely the past year, failed to set any fruit at all. The flowers, which were abundant, appeared to be perfect, and had what seemed to be perfect stamens, yet for some at present unexplainable cause, no fruit followed the bloom either from artificial or natural fertilization.

I might add that an attempt was made to fertilize the Crandall with the pollen of the Ruby Castle currant and some other varieties, but these attempts, as I have stated, all ended in failure.

SELF AND CROSS FERTILIZATION OF THE CHERRY.

The following tests were made with this fruit:

1. Twenty-five well-developed, single flower-buds were securely covered before the blossoms opened. About a week after the blooms had fallen the covers were removed. Only two of the twenty-five flowers appeared to be fertilized, and the ovaries of these only partially developed, for they dropped off long before maturity. A little more than five per cent of the uncovered flowers on the same tree produced fruit.

2. Six branches on different parts of a sweet cherry tree containing from 100 to 150 flower-buds each, were covered with fine gauze before any of the flowers were open. Six other branches, similarly situated and containing approximately the same number of flowers, were labeled for comparison. The percentage of developed fruit from each branch was as follows:

NUMBER.	COVERED.	UNCOVERED.
1	0.0 per cent.	13.7 per cent.
2	6.5 " "	8.5 " "
3	0.0 " "	25.6 " "
4	0.0 " "	9.6 " "
5	10.0 " "	42.0 " "
6	5.0 " "	30.0 " "
Average.	3.6 " "	21.7 " "

The covered flowers may have been injured to some extent by the excessive rains that fell during the period of blooming, but from all appearances those that were uncovered suffered the most from this cause. Branches on certain portions of the tree being more favorably situated, gave better results than others having the same number of flowers but a less favorable location. The test represents fairly well the influence and usefulness of insects in fertilization.

In this experiment the covers were removed as soon as the period of blooming was fully past, so the two lots were subjected to the same conditions except during this period.

3. An effort was made to secure between the sweet cherry and other crosses or species of the same other varieties. The blossoms of the Mazzard, a sub-order of the Mazzard, one tree, a variety operated upon by sweet cherry, were followed: These were crossed as follows:

1. With another distinct variety of sweet cherry.
2. With a sour or Morollo cherry.
3. With a wild goose-plum.
4. With a seedling peach.

Numerous flowers from each of the above-named varieties were collected and allowed to wilt so that the pollen could be easily dusted over the stigmas of the flowers prepared to receive it.

This preparation was made in the following manner: From four to twelve flowers on each of sixteen different

branches of the tree were selected just before opening, and the anthers carefully removed. Then the flowers thus treated were securely covered. Two days after, the conditions being favorable, the pollen was applied. Only one application was made and the sixteen lots were each equally divided among the four varieties of pollen. The flowers were immediately covered as before and left for nine days.

At that time a large proportion showed more or less influence of the pollen, as though fertilization had been effected; but in the course of a week or so nearly all of the set fruit dropped off. What was left was covered with mosquito netting just as the fruit began to turn red, in order to protect it from the birds. The number of cherries that matured and were picked was as follows:

1. Fertilized by sweet cherry, 4.
2. Fertilized by sour cherry, 2.
3. Fertilized by plum, 1.
4. Fertilized by peach, 11.

There was no apparent difference in the fruit, but the larger number of successful crosses, with peach pollen, when the same number of flowers were tried with each of the three other varieties, is significant. The pits have been saved for planting.

WILLIAM R. LAZENBY.

Ohio State University.

A SIMPLE RAIN GAUGE.

Let the tinsmith make a funnel with a small—say one quarter inch—opening at bottom, and having a two-inch band soldered round the top as shown in sketch, to prevent the rain that falls within it splashing out again. The upper edge of this band must measure an exact eight inches in diameter. Take a good, large bottle—an ordinary wine bottle will serve, but in localities where the rainfall is heavy something larger is preferable—into this bottle measure three and one half fluid ounces, and mark the bottle at the water level; so on till the bottle is filled, marking the water level of each added measure of three and one half ounces.

Each of these graduations shows one eighth inch of rainfall. For convenient references the graduations may be marked on a strip of paper and gummed outside the bottle.—*Exchange.*

A PRACTICAL SYSTEM OF MANAGING AN APIARY FOR SURPLUS HONEY.

In running an apiary for large yields of surplus honey, the first thing we want at the beginning of the honey flow is bees. We want to know how to have our hives literally "boiling over" with bees, for it requires bees to gather the nectar from the flowers. To get the bees at the proper time we must have a prolific queen—one whose reproductive powers, or egg laying, we can manage to suit the time of our honey flow. We must also see that our bees are well supplied with plenty of stores, both honey and pollen, in early spring, and well protected from the cold nights and early frosts by keeping the hives well protected with chaff or other suitable material.

As the danger of chilled brood from cold "snaps" begins, and brood from commence to spring to pass, we must insert an empty lead the brood-nest by caution less empty comb in middle, using cause "we get ahead of the bees and then they can protect in case a cool spell should set in. In a few days take the two outside frames containing brood and place them in the center, placing the two center ones in their places. Repeat this a few times, and when all danger of chilled brood is past, take the frames containing the most brood and place them next to the sides of the hive, placing those containing the least brood in the center.

If there are not enough stores, feed a thin sirup made from granulated sugar. Place rye flour where the bees can have free access to it. They will carry this in, which answers for pollen in brood rearing. When the honey flow sets in, which is known by the bees commencing to whiten their combs, along the top bars, reverse your frames and put on your sections, with starters or partly built out combs for "bait." If bees refuse to go into the sections, fill a section with comb containing drone brood and place this in the

center of your super. I know all this is not new, but the proper management during swarming time is where the main surplus crop is secured.

When I first commenced keeping bees I read in our bee books and journals that when our bees swarmed we must secure as many foragers with the swarm as possible. This was accomplished by moving the old hive to one side, turning it half way around and placing a new hive in its place, when a swarm issued. The swarm was then hived on the old location. Every day the old hive was turned a little, so that on about the sixth day it faced in the same direction as the new hive containing the swarm. At about 12 o'clock, when as many of the bees were out as possible, the old hive was carried to a new location, so that the returning foragers would enter with the swarm.

This required too much labor, and I adopted a plan requiring no hiving-boxes or other swarming implements, giving much better results and requiring much less labor. I clipped the wings of all my queens, and when a swarm issued I caught and caged the queen, moved the old hive a few feet to one side and placed a new hive in its place. I then took the super off of the old hive, using a little smoke, of course, and set it aside. I next took off the honey-board and lifted out the two outside frames from each side of the brood-nest, with their adhering bees, and placed them in the new hive, breaking off all queen cells and again reversing the frames. I then filled in between these four frames, four other frames (an eight-frame hive is best), filled with foundation, put on the honey-board and a new super of sections filled with foundation, and on this super I placed the super from the parent colony (old hive) and covered them up. By this time the swarm was returning, when I released the queen and let her run in with the swarm. I had them swarmed and hived at one operation, with very little labor, and the result was more honey from the swarm than under any previous management.

The object in putting into the new hive the four frames from the old one was twofold. First, to get the working bees with the swarm; and second, to so reduce the strength of the parent colony that I would not be troubled with after-swarms—swarms issuing with virgin queens, the wings of which I could not clip, as they had never mated. I then carried the old hive to a new location, taking care of the queens as they hatched out, and giving frames as needed, so that the old colony built up strong and in good condition for winter.

Last season when my first swarm issued I was away from home. My wife moved the old hive to one side, put a new one in its place, gave the swarm four empty combs and left them thus until I could return and "fix" them. I returned about sunset, and when I opened the hive I found a vast number of the cells on all the combs pretty well filled with the honey that the bees had brought in their sacs from the parent colony. Here was a valuable lesson accidentally learned. "If those bees had been given frames solidly filled with young brood or sealed honey, and only starters in the other frames, so that not one empty cell could have been found in the brood-nest, then they would have been compelled to deposit the honey in their sacs in the sections, and thus the habit of going 'upstairs' would have been induced, which would have been kept up till the end of the honey flow."

This was my reasoning. I then changed my system to suit it. When my next swarm issued I hived it on the plan given above, except that instead of giving them the outside frames and frames of foundation, I selected four frames containing eggs or very young brood, or sealed solid with honey, and placed between them four other frames with one-half-inch starters. It would be several days before any of the brood would hatch, and as fast as the bees built comb from the starters the queen was ready to deposit it full of eggs. In one hour the bees were working lively in the sections, just as I had calculated they would, and kept working in the sections to the end of the season. This plan works to my entire satisfaction with the invertible, hanging frame. In using the invertible and divisible hive, with closed end frames, a slight change in the above plan would have to be made.

Now, why fuss with "swarming-boxes" and other expensive, unnecessary and annoying implements, and then be mortified at having your surplus crop cut short, and your best queens and most valuable swarms abscond, when an inexpensive and much better plan can be adopted—one that will require much less labor, save the climbing and cutting of valuable trees, the loss of fine queens and swarms of bees, and give more honey?

Don't like to clip your queens' wings? Then use friend Alloy's queen and drone traps. You work to prevent swarming, so as to keep down increase, do you? I would not have bees that would not swarm; but if I wanted to keep down increase I would combine Dr. Tinker's plan with the above; Simply shake all the bees from the remaining four frames from the parent colony, in front of the hive containing the swarm, and place them over some colony capable of taking care of the brood. No, sir; I would not use the parent colony, or any other, for that matter, as a nucleus for queen rearing. I would use a more progressive and much better plan for queen rearing.

T. K. MASSIE.

A WINTER TONIC.

If you have never had lettuce of your own raising in mid-winter, do not live another winter without it. It is a tonic, a luxury, that wards off (the doctor) and builds up. Even the sight of it, beautifully green when the earth is "sere and brown" or covered with snow, is a help.

Plant seeds in a window-box. If the ground be frozen and no protected place can be found where a pit may be dug, make a "pen" of boards or plank, three feet wide and six feet long, just the dimensions of a gardener's sash. Make the pen three feet deep; then put in two feet of green horse-manure, crowded down a little, and on top a foot of rich loam, good black earth, made richer by fine manure.

On all sides of pen, outside, bank with earth if it can be obtained, or with hay, straw, stalks. Transplant the plants from the window-box when the leaves are an inch long. Keep the earth moist with tepid water. The first rank heat of the manure should be allowed to pass off before the plants are set out. The sash should be raised every morning and the bed aired, and in the middle of the day the sash should be raised in sunny weather. Cover the sash at night with tarred paper and weight down with boards to prevent the wind from blowing it away. Maintain a summer heat. A little practice will teach how to regulate, raise or lower the sash. Lettuce is more hardy than some suppose. It will endure, for a short time, considerable heat and considerable cold.

Later, start field-plants in the bed, and when these are transplanted, plant cucumbers in the bed and let them "riot" in it all summer.

GEORGE APPLETON.

SUNFLOWERS.

I raise the large Russian sunflowers every year. I plant them three feet apart each way and thin to one stalk in the hill. When they are in bloom I strip off the leaves and give them to the cows and horses. The heads will grow larger. I leave a few leaves near the head. When they get ripe I cut off the heads and take a piece of lath twenty inches long and whip off the best seeds and let the hens pick the rest. The seed is good for horses. It makes them slick. I take two bushels of oats to one of sunflowers and get them ground together. Three quarts twice a day is enough.

Tra, N. Y.

S. N. G.

Cause of Rheumatism

An acid which exists in sour milk and cider, called lactic acid, is believed by physicians to be the cause of rheumatism. Accumulating in the blood, it attacks the fibrous tissues in the joints, and causes agonizing pains. What is needed is a remedy to neutralize the acid, and to so invigorate the kidneys and liver that all waste will be carried off. We can honestly recommend Hood's Sarsaparilla for these purposes. It has cured others of rheumatism and it will cure you.

Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

THE EXPENSES SHOULD BE BOOKED.

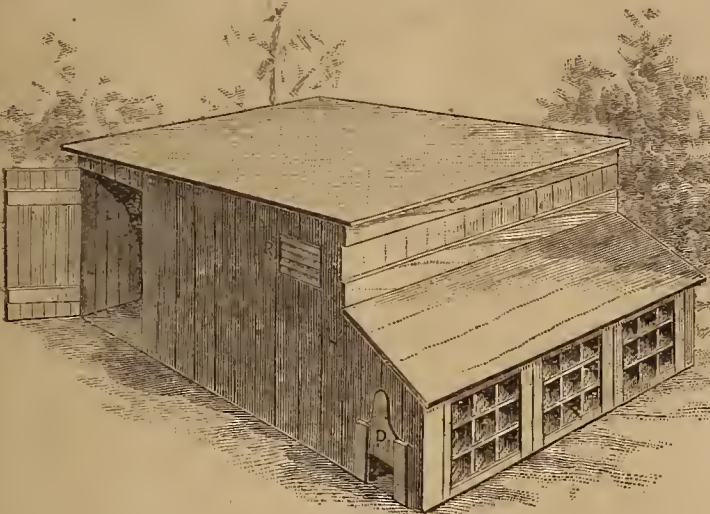
It is only right and proper that all sums expended for the support of the hens should be charged against them, whether they are kept simply to supply the family with eggs or to ship to market, and the new year is the time for beginning the keeping of a book account in order to know all the cost. On the other side the hen must be credited with all eggs and chicks sold, and with all poultry and eggs used in the family, as well as with all eggs used for incubation. It is sometimes customary to only estimate the profit by

PROVIDING LIME FOR HENS.

The best way of providing lime is to put a lump of lime in the drinking vessel. Some of the lime will be dissolved in the water and thus drank by the hens. Lime will also assist in preventing the spread of roup through the agency of the water, and it sometimes aids in correcting bowel disorders. It is at least cheap, and will do no harm whether beneficial or not; but we can safely assert that by keeping a small lump of lime in the water it will prove of great advantage.

POULTRY-HOUSE AND INTERIOR.

The poultry-house illustrated in this issue may be of any size, but as shown, the house is 10x13 feet, intended for 25 fowls. The front is 8 feet, slanting to 6 feet at the rear, the shed being 3x10 feet (main part 10x10 feet). The shed is intended as a dust-room, and for scratching in rough weather. The house may be boarded or built in any manner, with tarred paper roof. In Fig. 2 is shown the interior, B being the feed-box; C, the grain-box; D, the roosts; E, the nests; A, the egress



POULTRY-HOUSE—FIG. 1.

the number of eggs sold; but the eggs used in the family are just as much a portion of the proceeds of the hens as are the eggs that are sold, and it is unfair to the flock to withhold that credit from them. If a strict record be kept of all the poultry and eggs consumed at home, it will be a matter of surprise, at the end of the year, to notice how much the flock has contributed to the table. A small flock gives better results than a large one, for a family, because the table scraps and waste material largely contribute to the supply of food, thereby lessening expenses.

CHANGING EGGS.

One of the practices among farmers is changing eggs with each other in order to avoid in-breeding. In the first place, the eggs themselves are a risk, as no one can tell what they may produce, perhaps no two chicks from them being alike and no breeding of value in the stock. In the next place, the changing of eggs makes the flocks in a community all of one blood, so that really nothing can be gained by the practice after it has been persisted in for a while. Get pure-bred males from some source, or eggs from some breeder of pure breeds. If you must cross, do it correctly. Do not waste time in the attempt to better your flock by changing eggs for some nondescript stock that has no merit nor possesses any advantage. To improve a flock, one should know the kind of stock he is using, and what can be expected from it. The changing of eggs is a practice usually pursued by those who do not know the value of the breeds, and such persons should not be encouraged.

ROOSTS AND LARGE BREEDS.

We noticed a certain breeder of Brahmas provided no roosts for his flock, and we have found his plan to have some merits. The large breeds are liable to leg weakness, when fat, to injury in getting on or off the roosts, and to too much draught on the perches. When provided with a bedding of straw they escaped these difficulties and seemed to be less subject to ills and injuries. It is a point worth considering, and the plan of no roosts for the large breeds should be given a trial.

\$100 REWARD. \$100.

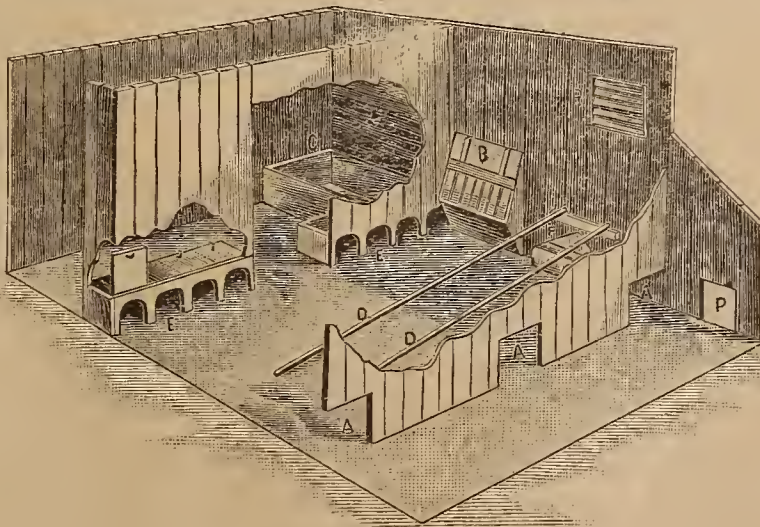
The readers of the FARM AND FIRESIDE will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address F. J. CHENEY & CO., Sold by Druggists, 75c. Toledo, Ohio.

COTTON-SEED MEAL.

Cotton-seed meal, about one gill a day for ten hens, mixed with the soft food, is an excellent addition to the ration, but occasionally it should be dropped and linseed meal substituted. The cotton-seed meal is very nitrogenous, and will largely aid in supplying that which may be lacking in a food that is almost wholly carbonaceous. It serves to assist in completing a ration more than to provide, of itself, a special food for poultry.

PROVIDE GRIT FOR THE HENS.

Whether broken flint, ground shells or in any other shape, the grit must now be supplied to the hens, as they cannot procure it; for even if grit is plentiful it cannot be picked up by the fowls. It is essential that it be supplied in some shape.



POULTRY-HOUSE—FIG. 2.

and this duty is as important as the allowance of food. Some persons use ground oyster shells, which are excellent, but unless they are coarse and sharp, the hens will use but little of them. The soft oyster shells are of but little service. One of the best materials is Chinaware. All the broken cups, saucers, dishes, plates, etc., should be pounded for the hens; the fowls will swallow them with avidity, and it will surprise the novice to notice how quickly the hens will eat pounded glass when grit is scarce, and that, too, with a relish and without injury. The hen has no teeth; her food is masticated in the gizzard, aided by the sharp sub-

stances swallowed for that purpose, and when they cannot procure the sharp, hard substances, the result is indigestion, disease and a failure to produce eggs. Do not omit the grit as a portion of the ration for hens.

CORRESPONDENCE.

A REMEDY FOR CROPP-BOUND.—I should like to make known through the columns of FARM AND FIRESIDE, a valuable remedy for crop-bound fowls, which is yeast. J. W. R. Sago, Ohio.

REMEDY FOR LICE.—I have tried several remedies recommended in your excellent paper with partial success, but the best remedy I can find is one I invented for perches. Pour spirits of turpentine along on the perches in the morning, and when it is time for the chickens to roost, the lice will be dead and the spirits of turpentine dispersed. Be sure to apply it in the morning, so it will not damage the chicken's feet. J. H. B. Portland, Mich.

A YEAR'S RECORD.—On December 1, 1889, I had 134 hens and some pullets raised from them. I received 14,171 eggs. I sold 1,108 dozens and used 50 dozens. I set 281 eggs, hatched 214 chicks, and lost 30 chicks. I sold 90 hens and chickens, and ate 50 hens and chicks. I got 50 bushels of hen manure. The feed I gave them was corn, 4,600 pounds, meal, 2,300 pounds, bran, 1,050, 35 bushels of buckwheat, 4 bushels of wheat and 2 bushels of barley. For eggs I received \$209.95, for chickens \$31.21. Adding to this the value of eggs and chickens used, the total income was \$287.41, and the total expenses were \$109.45. The net cash income, after deducting all expenses and what was used in the family, is \$151.63, or \$12.64 per month. I reduced my flock December 1, 1890, to 135 and have commenced another year's account. S. F. S. Clark's Summit, Pa.

INQUIRIES ANSWERED.

Peafowl Feathers.—Mrs. A. C. Olmsted, Ill., writes: "Please inform me where I can find sale for peafowl feathers."

REPLY:—We know of no one who buys them, but they are sold by commission merchants, and would no doubt be bought by those who manufacture feather dusters or such goods.

Mating Ducks.—G. G. B., Wheelersburg, Ohio, writes: "Do ducks mate the same as geese, or will one drake do for four or five ducks?"

REPLY:—It is usual to allow one drake with five ducks, but it is better to have only four ducks with one drake.

Brooders.—S. F. S., Clark's Summit, Pa., writes: "In your December 1st issue you gave a plan of brooder. Where can I buy one like it?"

REPLY:—We give plans for our readers to make their own, nothing being patented. We know of no one who makes a business of manufacturing them, as we do not infringe on any of the plans of manufacturers.

Roup.—S. P., Mumford, N. Y., writes: "What is the cure for hens that seem to be dizzy, lose the use of their legs, are blind, and finally die?"

REPLY:—It may be roup, caused by top draughts, or it may be that the male should be removed from the hens, he being large and fat. If roup, anoint eyes with a mixture of one part spirits of turpentine and four parts sweet oil, once a day, and give half a teaspoonful at the same time, as a dose.

Indigestion.—N. S. F., Higganum, Conn., writes: "My pullets' combs turn pale; they droop and die. I opened one and found the liver very much enlarged."

REPLY:—Probably the result of overfeeding and lack of grit. The pullets are no doubt very fat. The use of Douglass mixture or such will also cause the difficulty. Feed only once a day, at night, and make the hens

scratch for their food until they improve, then feed twice a day.

The Best Breeds.—J. R. G., Brownsville, Tenn., writes: "1. How many hens should be with one male? 2. Which is the best breed for laying? 3. Which is the best breed for market? 4. Which two, crossed, are best for laying and market?"

REPLY:—1. About ten. 2. Leghorns and Minorcas. 3. Wyandottes and Plymouth Rocks. 4. Probably the Brown Leghorn and Wyandotte.

Guinea Chicks.—L. B. R., Eaton Rapids, Mich., writes: "Please give directions for raising the guinea fowl. Neighbors who have tried lose all the chicks when they are two or three weeks old."

REPLY:—The cause of loss of young guineas is probably due to the large, gray lice on the heads. They should be hatched by hens, kept warm and dry until well feathered, and fed four or five times a day on a variety of food, including a little meat. The lice go from the hens to the chicks.

MAULE'S SEEDS LEAD ALL.

Our Catalogue for 1891 is pronounced absolutely the best seed and plant book issued; printed in good legible type, on good paper, it excites the admiration of all. 664 varieties of Vegetables, Flowers, Flowering Plants, Small Fruits, Fruit- and Nut-bearing Trees, etc., are beautifully illustrated, as many as 38 of them being in colors. This catalogue is mailed free to all who ordered in 1890; but as the postage on the book alone is five cents, we must ask all others who are not customers, desiring a copy, to send us twenty-five cents in stamps for it; and in addition to sending our catalogue, we will also mail you, without extra charge, a packet of the wonderful BUSH LIMA BEANS, THE MOST VALUABLE VEGETABLE NOVELTY INTRODUCED IN YEARS; AND A PACKET OF THE NEW MARGUERITE CARNATION, THE FLORAL WONDER OF 1891. These two packets of seeds are worth 25 cents; so it virtually means the same thing as mailing our catalogue free to all who answer this advertisement. Address

WM. HENRY MAULE,
PHILADELPHIA, PA.

Mention this paper when you write.

USE FERRY'S SEEDS

BECAUSE THEY ARE THE BEST.

D. M. FERRY & Co's

Illustrated, Descriptive and Priced

SEED ANNUAL

For 1891 will be mailed FREE

to all applicants, and to last season's

customers. It is better than ever.

Every person using Garden,

Flower or Field Seeds,

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D. M. FERRY & CO.

DETROIT, MICH.

Largest Seedsmen in the world

Mention this paper when you write.

100 PER CENT PROFIT GUARANTEED

To all who intend to plant Fruit and Ornamental Trees, Shrubs, Vines, Roses, etc., if you will give me your name and P. O. address on postal card directed to J. Hammond, Nurseryman, Geneva, N.Y. Mention this paper when you write.

The Best Brooder Ever invented for raising chicks; only \$5. Address G. S. SINGER, Cardington, Ohio, for circular.

INCUBATORS.

Bates' Egyptian Incubators. Send for circulars. JOSEPH I. BATES, Weymouth, Mass.

POULTRY for PROFIT.

We will send for 25 cts., or 15 cts. if you mention this paper, FARM-POULTRY, a 20 page magazine, six months. Sample copy free. I. S. JOHNSON & Co., Boston, Mass.

IMPROVED INCUBATOR

EXCELSIOR

Simple, Perfect and Self-Regulating. Hundreds in successful operation.

Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Send 6c. for illus. Catalogue.

Circulars free. GEO. H. STAHL, QUINCY, ILL.

Nothing On Earth Will

MAKE HENS LAY LIKE

Sheridan's Condition Powder!

It is absolutely pure. Highly concentrated. In quantity it costs less than a tenth of a cent a day. Strictly a medicine. Prevents and cures all diseases. Good for young chicks. Worth more than gold when hens moult. "One large can saved me \$40, send six for \$5 to prevent roup," says a customer. If you can't get it send us 50 cents for two packs; five \$1. A 2 1/4 pound can \$1.20 post-paid; 6 cans \$5, express paid. "THE BEST POULTRY PAPER," sample copy free. Poultry Raising Guide free with \$1 orders or more. I. S. JOHNSON & Co., Boston, Mass.

A Saw Mill for light power at a low price was introduced first by us. Many are in use; many are wanted. If you want one remember that

\$188.00—A Saw Mill For—\$200.00

are our figures, and that no better, substantial, durable small mill can be found. Address the old stand,

The Lane & Bodley Co.

ESTABLISHED 1851.

CINCINNATI, O.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

EXTRACTS
FROM CORRESPONDENCE.

FROM COLORADO.—G. A. S., writing from San Jose, California, tells of people there making from \$300 to \$500 off of one acre. Well, we don't brag out here in Colorado but there are men living here in Boulder who have sold grapes off of one acre to the amount of \$1,500 to \$2,000 in a single season. F. L. B.
Boulder, Colorado.

FROM WASHINGTON.—The biggest crop in this country is timber, and hemlock comprises a large amount of it. Hemlock is counted a cipher here, unless for stove-wood; and few use it even for that. There is but little land here under cultivation. The bottom land produces good crops. The land is very expensive to clear. Most everything is high. Wheat, in the Palouse country (about 200 miles from here), is worth 45 cents per bushel, and here it cannot be bought, often, for 2 cents per pound. Nearly all freights from the East advanced about 16 cents per 100 pounds, but farm machinery \$1.30 per 100 pounds. There has been a great deal of railroad building between here and the Sound, but the rain has stopped some and combination of railroads others. The farmers won't arouse thoroughly until the halter is drawn tighter. J. O. H.
Melbourne, Wash.

FROM SOUTH DAKOTA.—Hill City is a booming town situated in the center of the tin mining district, and is the headquarters of the Harney Peak Tin Mining Company. The B. & M. railroad has just been completed through the town, connecting it with Deadwood, forty miles away. The Black Hills has been a great gold mining district, and is yet in the North Hills. Now tin is the leading ore in the South Hills and is causing much excitement. But the Indians are causing more excitement just at present. The soldiers are trying to disarm them and have had some fights. The towns in and about the Hills have organized militia for use in emergencies. There is grand scenery here in the Hills, but it is not much of an agricultural district. Wages are good but the cost of living is high. O. S. F.
Hill City, South Dakota.

FROM MISSOURI.—Lu Maries county we have had good crops for many years. Wheat yields from 12 to 25 bushels per acre; oats, 25 to 40; corn 30 to 50. Prices of grain range as follows: Wheat, \$1; oats, 50 cents; corn, 45 cents. All kinds of fruit do well here. This is one of the richest and best counties in the state for farming and stock raising. Wages for hands on a farm range from \$12 to \$18 per month during the summer months. The people are robust and healthy. Maries county is watered by the Gasconade river and many other small streams. We have plenty of good drinking water here, many fine springs. Vienna, our county seat, is a very fine town. Vichy and Grove Dale are also nice towns. Poultry and eggs are largely raised here. Eggs are selling at from 20 to 22½ cents per dozen; butter, 15 cents per pound. We have many churches of all kinds; namely, Methodist, Christian, Catholic, Presbyterian, etc. Land ranges in price from \$5 to \$12 per acre. Horses and mules are in very good demand here. Horses are selling at from \$60 to \$125; mares, \$75 to \$150; mules, \$85 to \$150. The best time to come out here is in the fall or in the early spring. Lanes Prairie, Mo. A. A. N.

FROM WASHINGTON.—Do not put too much confidence in new town sites and land booms in what you suppose to be unsettled countries. Any man who has a farm in the state of Ohio, where he can make a comfortable living, had better stay there. That is my native state. My father left there when I was seventeen years old, in 1843. I have been looking for the happy land of Canaan ever since and have not yet found it. All countries have advantages and drawbacks. I would much rather live here than in the state of Ohio, as I am already here and came in an early day. But the chances will be against the man that comes to-day if he expects to find government land to take up. The principal grain raised in this country are wheat, now worth 42 cents per bushel; oats, \$1.15 per cental; barley 90 cents per cental. The Farmers' Alliance is well represented here; but as an individual member I can hardly endorse the platform adopted at Ocala. The first plank is badly cracked and is not in harmony with other parts. Be careful, brother farmers, and do not get things mixed; I fear the document was not well considered. Waverly, Washington. J. R.

FROM VIRGINIA.—Albemarle county lies in Piedmont, Virginia. It is quartered by two great railroads, the C. & O. cutting it in two near the center from east to west, and the Richmond and Danville running from north to south; they cross each other at Charlottesville, our county seat, a city with a population of 8,000. It is growing rapidly, and is destined soon to be a very important place. It has street cars, electric lights and one of the very best water supplies in the state. Its educational facilities are unsurpassed. The University of Virginia is located here, and there are a number of schools of high grade. Our soil is of a red color, and well adapted to wheat, corn, oats, tobacco and potatoes. All kinds of fruit flourish here; it's the home of the Albemarle pippin, which always commands

a high price. Some of our farmers got as high as \$7 per barrel for them last season, and none sold for less than \$4 and \$5. I don't know of any better investment than money put into good pippin land. Good land can be bought for that purpose for from \$20 to \$30 per acre. We have rich deposits of iron and lead, slate and soapstone. The slate and soapstone are being extensively worked; both are of the very best quality, and in sufficient quantity to last the world for a thousand years. The only slate pencils made in the United States are made in this country. Our climate is excellent. The thermometer ranges from 20° up to 90°, and seldom ever above or below these figures. We have, in short, the very best of everything, and extend a cordial invitation to all good people who wish to make a change to come and enjoy these good things with us. I have no axe to grind or land to sell. I have a little home that I have fixed to suit my taste, and don't wish to sell it. J. N. L.
Red Hill, Va.

FROM WISCONSIN.—Oconto county is on the west shore of Green Bay. It has been settled for about fifty years, but for about forty years there was not much farming done. It had, up to about ten years ago, been one of the heaviest lumbering counties in the state, and about all the farmers did was to till a few acres, depending on the jobs they would get from the lumber firms in the winter. But since the timber is about all gone, we have turned our attention to tilling the soil. The soil is from the heaviest clay to the lightest sand. The county is well watered with two rivers and many living spring brooks. Good well water can be found by digging from fifteen to thirty feet. Two large railroads run through the county—the Chicago and Northwestern and Chicago, Milwaukee and St. Paul. Each of the companies have over 8,000 miles of track running through six and seven different states. We have four large saw-mills in the county which cut from ten to fifteen million feet of lumber every year, besides a number of smaller mills. The logs for the larger mills are cut and banked on the rivers in the winter, in the extreme northern part of the county; and some of the logs are floated down the rivers for over one hundred miles. Every farmer who has a good team and wants to work in the winter can get work in the lumber camps at good wages—from \$50 to \$75 per month—and the lumber firms furnish sleds and board for man and team. Crops were good last year, and we always get good prices for what we raise, as we have a large mining region north of us. Iron mountain is only about sixty miles away, where is worked one of the largest iron mines in the world—the Chapin mine. Wages for farm hands are from \$20 to \$25 a month. We have plenty of good land here for sale, close to good schools, that can be bought at from \$5 to \$10 per acre, on long time. I have lived here twenty-one years and have never seen a general failure of crops. Our county is out of debt and has money in the treasury. For those that want to get a good home on small capital, and are willing to work, this is the county. We have no malarial diseases here; have never heard of the fever and ague. We have good schools and churches and good neighbors. D. B. B.
Abrams, Wis.

FROM SOUTHERN OREGON.—Autumn was long and bright last season; there was hardly rain enough, until now, to enable the farmer to put in his small grain. Our rains are not, as many suppose, disagreeable; there is no blow nor bluster, but simply a sleepy, drizzling, steady, persistent, copious downpour for two or three days, then bright sunshine. So far, frosty mornings have prevailed since October 15th. Rainy weather is always warm. Up to date, no snow has fallen save on the mountain tops. We do not anticipate much snow this season. Stock on the ranges are in good condition, and until snow comes no feeding will be required. High up on the mountains the grass is very fine. A typical Southern Oregon winter will help us materially, as hay is not at all plentiful, owing to late sowing last spring, followed by a dry season. We made no money last harvest on hay and grain. Dull times followed as a matter of course. When the farmer fails other occupations suffer. Our fruits were in good demand, and many boxes of "big, red apples," delighted both buyer and seller. Our apples fairly jumped into fame this year. Many boxes were distributed at Washington by our representatives in Congress, and no better advertising card could have been issued. This immediate vicinity furnished some of the finest fruits shipped from the state. This demonstrates the fact that foothill lands are the best orchard sites. These lands produce apples, prunes or pears that will bring more than enough over the price of valley apples to pay the extra cost of transportation. These lands are to be had yet for a low figure, many being open to homestead or pre-emption. Here is an opportunity for many families of small means to obtain homes. These lands will produce good crops of hay and grain, and their natural beauties make them desirable. A number of pushing settlers are desired; the lazy, thieving, harping, ne'er-do-well are not in demand. If you have true grit, with the means to live for a year, you need not fear to locate on one of these foothill claims. The signs of the times are that we are entering upon a season of prosperity. We shall gladly hail it. S. M.
Spikenard, Oregon.

TO PROVE the SUPERIOR QUALITY of
BURPEE'S SEEDS

WE WILL MAIL ALL THESE

5 Finest Flowers 26 cts. together with our complete **FARM ANNUAL for 1891.****CROZY'S CANNAS—**

New Large Flowering, Ever-blooming Dwarf French Cannas, with immense clusters of magnificent flowers, as richly colored as Orchids, and more profuse flowering than Gladioli. See colored plate in Catalogue and illustration herewith. Neat, dwarf growth, with handsome foliage. They bear their beautiful, large flowers, of many colors, all summer, the first year from seed.

GOLDEN GATE POPPIES. A grand novelty. Entirely unique in wondrous variety and brilliancy of bloom; myriads of most gorgeous flowers of every conceivable shade.

FRINGED STAR PHLOX. An odd novelty of surpassing beauty; 40 varieties of elegantly edged and fringed flowers of star-like form.

NEW FANCY GERMAN PANSIES. Special selection of only the brightest and best, superbly spotted and stained, striped and margined, Imperial Prize Pansies, of striking beauty. Flowers of perfect form and large size.

ECKFORD'S NEWEST SWEET PEAS. Embracing the latest novelties, largest and most beautiful named varieties in superb mixture. Never before equaled. Pkt. 10 cts.; oz., 20 cts.

For 26 cts. (13 two-cent stamps) we will send all the above—**FIVE FINEST NOVELTIES** with full directions for culture printed on each packet. If you do not want all of these seeds, you can select any **Three Varieties for 16 cts.**

If you want any other Seeds, ask for

BURPEE'S FARM ANNUAL FOR 1891,

With colored plates painted from nature, tells all about the **BEST SEEDS** including **RARE NOVELTIES**, which cannot be had elsewhere. It also tells how to get **Valuable Premiums**, including **FREE!** Name this paper, and write to-day.

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

When you write, be sure to say you saw this advertisement in Farm and Fireside.



RED RIDING HOOD PANSY

IPOMEA PANDURATA,

HARPY DAY-BLOOMING MOON FLOWER.

Grows from bulbs. Lives out all winter. Increases in size and beauty each year. Blooms night and day. The flowers are six inches across, and very fragrant.

RED RIDING-HOOD PANSY.

Most beautiful of this popular flower. Large size, deep red color. Hazel eye, edged with shining gold.

Z. HAAGEANA fl. pl. (GOLDEN CLOTH.)

A beautiful shrubby plant two feet high. A mass of bright golden flowers from June to December.

WILSON'S SEED AND PLANT CATALOGUE AND LIVE-STOCK ANNUAL FOR 1891.116 pages, 200 fine engravings, handsome colored plates, full of useful information. The most reliable catalogue published. All the **20 CENTS** in postage stamps. A valuable collection of **BULBS AND SEEDS** above sent by mail for Address **SAMUEL WILSON, MECHANICSVILLE, PA.****NIAGARA GRAPE VINES**Also other **SMALL FRUITS.** New Descriptive Catalogue Free. **T. S. HUBBARD CO., FREDONIA, N.Y.**

FROM MINNESOTA.—Wright county is one of the richest in the state, in regard to soil and natural advantages. It is heavily timbered with maple, oak, ash, elm and basswood. It is also well watered by numerous lakes and creeks. The Crow river runs through it from west to east, and several saw and grist mills are located along its banks and run by water power. The surrounding country furnishes the material to work upon. Flour, lumber, boxes, staves and broom handles are the principal articles produced. The county contains between 25,000 and 30,000 inhabitants, whose chief occupation is tilling the soil, which yields them a bountiful return for their labor. Wheat is the principal crop. Very little corn was raised a few years ago, but it is fast coming into general favor, and more is grown each succeeding year. It produces an average of about 45 bushels per acre. Our crops the last season were excellent, and everything brought a good price. Wright county will need no outside aid, for I believe that people better situated and more prosperous would be hard to find. There are over 700 square miles in the county, with thirteen villages. Three railroads run from west to east, connecting us with Minneapolis and St. Paul, where we find a ready market for our pork, beef, poultry, butter and vegetables, only thirty miles distant from the producer, which, to the farmer, is worth considering. Intellectually, we are abreast of the times, and eastern people are surprised, when they come among us, at the progress that has been made in such a short time. There are one hundred and twenty school districts, some of them independent, with graded rooms. There are 6,276 school children. Eight local newspapers supply the people with something to think about and the latest current news. Land is worth from \$10 to \$100 per acre, according to location and improvements. The climate, for the last three years, has been all that could be desired, and no complaints have been heard. Some of our citizens have gone away to find a better place, and have, with few exceptions, come back, satisfied that Wright county and Minnesota cannot be excelled. F. F. C.
Delano, Minn.

FROM ARIZONA.—We have the most delightful climate here of any in the United States, and the most favored of any for the invalid. So many have come here before it was too late

The Best of all Cauliflowers!

Is the sort now sent out for the first time, the Perfection. The Snowball. Gilt-edged and Extra-early Erfurt are all excellent sorts, but an extensive market gardener, who has raised these and all other sorts, believes that within three years the most enterprising market gardeners will have dropped these and be raising Perfection. Trial package, 25 cts. per doz., \$4. Seed catalogue **FREE** to every one. JAMES J. H. GREGORY & SON, Marblehead Mass.

and have built up strong and healthy. When I started from Baltimore, eleven years ago, I did not think I could hardly live six months, and now I am well and strong. Our climate and country are just becoming known. Phoenix is the capital. We have one railroad connecting us with the Southern Pacific, a distance of only thirty-four miles. There is a bill pending now in Congress, granting us the privilege of taxing ourselves to build another road from here to the A. & P., by way of Prescott. Thousands of acres of fruit will be set out this winter and coming spring. Since oranges and lemons have been tried, and successfully, too, nearly everybody owning land is going to plant them as fast as they are able. Our figs are pronounced the finest grown this side of Smyrna, and have taken the premium at the mechanic's fair in San Francisco, experts pronouncing them superior to any raised in this country. Also in Chicago they were tested and the report is that they believed them to be equal to the Smyrna fig. This is a fine country for a poor man, and still finer for the man who wishes to invest. The pear, peach, plum, prune, pomegranate, apricot, quince, orange and lemon, figs and grapes grow to perfection. This is a great agricultural, mineral and stock-raising country. Here, of course, we depend upon irrigation. Persons with means can secure some good land yet that will double and treble in value in the near future. Our legislature meets this month and our city will be quite lively. While I am writing I look out upon the flowers in full bloom in my yard and think often of my friends in Philadelphia and Baltimore enduring the cold and sleety weather so famous in that country. The fields are green and lovely now. Mrs. W. E. T.
Phoenix, Arizona Terr.

HALSTEAD, KAN., Sept. 5, 1890. I received the Peerless Atlas you mailed to me. Thanks for the same. It is actually splendid and excels many of the expensive atlases sold through the country. J. S. KREIBIEL.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Queries deserving immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Old Coins.—C. M. P. For price list of old coins send stamps to Wm. P. Brown, 114 Nassau street, New York.

Manure Spreader.—E. A. T., Minter City, Miss. You can get a good manure spreader from the Newark Machine Company, Columbus, Ohio.

Book on Electro-Plating.—O. G. J. Owosso, Mich. You can get a book on electroplating from David Williams, New York. Price, —.

Cheese Factory.—J. W. S., Cheboygan, Mich. Any large firm dealing in dairy supplies can furnish you plans of cheese factories, estimate of cost of buildings, apparatus, etc. Address D. H. Roe & Co., Chicago, Ill.

Evaporator.—W. H. H., Brocton, N. Y. Candidly, we do not know which is the best evaporator, but we feel certain that you will make no mistake in buying the "Champion." It will pay you to buy a good evaporator for your "sugar bush." The superior article you can produce and the time you can save with a good evaporator will soon pay for it.

Oil Meal and Bran.—E. E. E., Poplar Bluff, Mo., writes: "Is oil meal worth \$2 per cwt. for cows and horses when bran and middlings are worth \$1 per cwt.?"

REPLY:—The food value of linseed-oil meal is not double that of mill-feed. Oil meal at \$1.60 per cwt. is as cheap as mill-feed at \$1 per cwt.

Effect of the Moon on the Weather.—E. S. Z., Naperville, Ill., asks: "Does the moon have any effect on the weather? During a drouth I have frequently heard it said that it will not rain until the moon changes. And further, does the moon cause the tides in the ocean?"

REPLY:—No, the moon does not control the weather in that way. It is constantly changing, instead of taking a jump once a week. The tides of the ocean are caused by the mutual attraction of the earth and the moon; but it does not follow from that that the moon has control of the weather or the growth of vegetation.

Muck.—A. C. W., Hugo, Ill., writes: "During the late drouth small ponds in our river bottoms went dry, and the muck in them dried out so that for four to six feet deep it was as loose and fine as flour and clean of trash. Why would it not do to bring it to the garden—a stiff, cold clay—and spread it three or four inches deep, let freeze all winter, and then dig and work it well into the soil next spring? Would it ruin the soil of the garden, or would it be advantageous?"

REPLY:—It would do very well, but it is not advisable to use too much new muck on land. Haul it to the barn and use it for bedding or composting with stable manure. If applied directly to the land, use plenty of lime to sweeten it.

Using Fresh Bones.—P. G., Oswego Falls, N. Y., gives a very excellent plan of using fresh bones. He says: "Get a small, hand bone-mill, and grind them for poultry feed. In this way you get a valuable poultry food and a very rich fertilizer in their droppings. All the bone is not reduced to a fine powder in these small hand-mills; but by the time it has served the purpose of grit in a fowl's gizzard it must be in an acceptable condition for any crop to which the droppings are applied." This is a most excellent way of using a limited quantity of fresh bones. The best part of the bones go to the production of eggs and to the flesh and bone of poultry, in which form it is more valuable than as a fertilizer. But the droppings of well-fed poultry are worth much more than those of poorly-fed.

Paint-Brush-Ash Palings-Cross-Cut Saws-Beehives.—C. W. L., Pekin, Ind., writes: "Is there any way to clean a paint-brush after it has once been used?—How long will palings made of sound ash last?—Where is the best cross-cut saw manufactured?—Do not bees winter better and swarm less when put in hives twice as large as are generally used?"

REPLY:—Clean the brush with turpentine. The time ash palings will last depends on circumstances, such as the location of the fence, etc. They ought to last fifteen or more years.—We do not know which is the best cross-cut saw; that is a matter of opinion; some prefer one kind and some another. Diss-ton & Co., Philadelphia, Pa., make as good as you can buy.—Bees do not winter as well in a hive too large as in one the right size. There will be less swarming from a very large hive.

Bean Weevil.—G. H. H., Brazilton, Kan. The bug you inquire about is the common pea or bean weevil (*Bruchus Pisi*). Shortly after the plants have flowered, the beetle lays her eggs singly in punctures on the tender pods. As soon as hatched, each little maggot bores through the pod and enters a seed. It feeds on the marrow of the pea, and by the time it is full grown and changed into a winged insect, not much more than the hull is left. It is a little remarkable that the germ of the seed is generally left untouched, and these "buggy" peas will often sprout and grow. No preventive method can be entirely successful unless generally adopted. Late-planted peas generally escape. Put the infested seed in a tight box or barrel, with a small quantity of bi-sulphide of carbon in a saucer placed on them. Keep the box tightly closed for a day or two, until the fumes have been diffused all through the seed. Handle the drug carefully, as it is very volatile and explosive. Keeping the infested peas in boiling water for a short time will destroy the insects without injuring the peas.

Tar Roofing.—J. A. A., Stand, Iowa, writes: "What is it that roof-painters mix with coal tar to make the roof water and fire proof?"

REPLY:—The following extract from "What Everyone Should Know," for sale at this office, will answer your question: "Then spread on several coatings of the following composition, previously boiled, stirred and mixed: Good clean tar, eight gallons; Roman cement, two gallons (or in its place very fine, clean sand may be used); resin, five pounds; tallow, three pounds; apply hot; and let a hand follow and sift on sharp grit sand, pressing it into the tar composition. If wished fire-proof, go over the above with the following preparation: Slake stone lime under cover with hot water till it falls into a fine,

powder; sift, and mix six quarts of this with one quart of salt; add two gallons of water; boil and skim. To five gallons of this add one pound of alum and one and one half pounds of copperas, slowly while boiling, one and one half pounds potash and four quarts of clean, sharp sand, and any color desired. Apply a thick coat with a brush, and you have a roof which no fire can injure from the outside.

Butter Not Coming.—L. A., Douglas, Kan., writes: "We are milking five cows, three of them fresh. We were making nice solid butter. About a month ago we turned them on the green wheat in the day-time, to a wheat straw stack at night. Right away the milk became harder to churn, the butter became mushy. Then it got so that it wouldn't gather at all. This week we churned six hours and butter did not come. Is it on account of their having nothing else to eat but wheat? The milk gets frothy like shaving lather and stays so."

REPLY:—The food is not suitable. If you cannot get good, bright corn fodder or clover hay, and must rely on the wheat straw, supplement it with a liberal ration of corn and oats ground together; two bushels of oats to one of corn. Give salt regularly. Soon after milking, while the milk is yet warm, pour into every five quarts of milk one quart of hot water. While the cream is rising the milk should be kept at the proper temperature, 45° to 50°. The cream may be allowed to ripen and turn slightly acid before churning. Then use a dairy thermometer and churn at the proper temperature, and the butter will come in less than thirty minutes.

Plowing Under Rye—Canada Thistles.—D. B. B., Abrams, Wis., writes: "(1) Can I plow under winter rye next spring and get any benefit by so doing and planting to corn or potatoes? It is sandy land. (2) Will Canada thistles that are cut with grass the first week in July produce seed that will grow or germinate? My neighbor has a large patch of thistles close to my farm that he cuts with his grass every year and feeds to his stock, then draws out the manure on his land; I have been fighting the pest for years and will not let one go to seed on my farm; but every year I find new thistles on different parts of my farm. I am successful in killing them with salt. My method is not to cut them, but to step on each thistle with one foot and press with my whole weight and at the same time give my foot a twist which will crush the thistles so as to let the salt act on the juice. It is very easy to kill them the first year as the roots are then killed, but if let grow until the second year the roots will send up new thistles. The reason some farmers claim that salt will not kill thistles, is they do not watch for the new thistles that spring up from the roots of the old plants. Go over the ground once a month with a pail of salt and look for the young thistles. Do this for the first year and there will be few thistles to fight the second year."

REPLY:—(1) Yes. (2) They should be cut before they bloom to make certain that no seed will be formed. Some weeds cut in full bloom have vitality enough to perfect a few seeds. Your thistles must come from seed. It is possible that the seed may remain in the soil for two or three years until a favorable season before sprouting. Your method, if persistently followed, will get rid of them.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Swelled Hoof Joint.—G. R. V., Steptoe, Wash. Bandage the swollen part with a bandage of woolen flannel, but commence the bandaging at the hoof, and renew the bandage at least twice a day.

Actinomycosis.—C. G., Wallace, Canada. If the morbid process is in the bone, the case is incurable. The treatment given in the June number of 1889 only applies to cases in which the morbid process is not in, but outside of the bone, beneath the skin.

Diseased Tooth or Teeth.—J. B. B., Melbourne, Fla., writes: "My horse will not swallow hay or grass, but chews it up, then spits it out. He eats grain and bran sparingly and is getting very weak and thin. Tongue, bowels, urine and breath seem normal, and he has no other symptoms of disease except a hard swelling on the right muscle of his neck where it is attached to the base of the skull back of the ear."

ANSWER:—Examine the horse's mouth and you will find one or more diseased molars, which must be extracted.

Umbilical Hernia.—D. M. F., Mechanics-town, N. Y., writes: "I have a colt five months old. When he was about two months old, there came a hard bunch just in front of his sheath, which in a short time broke and discharged and went away. About two weeks since another lump came, which is soft and I can press it in and feel a hole. The lump is about an inch and a half in diameter."

ANSWER:—The first swelling, which broke, it seems was a sore navel, and the present swelling undoubtedly is an umbilical hernia. As it is not very large and the colt is young yet, it may gradually disappear. If it does not, it is yet time enough next summer, or even later, to remove it by means of an operation.

Feeding Colt.—H. W. C., East Orange, N. J., writes: "(1) How much hay should I give daily to an eighteen-months-old colt? (2) How much corn, if any, at a feed? (3) What is the best food for them at that age, and how much should I give to make them grow well? (4) At what age do they generally commence to break young colts? (5) Is a two-year-old colt too young to drive moderately, say three to five miles a day? My colt has an awful stomach on her, caused, I think, by the hay. I give her daily about nine pounds, at night only."

ANSWER:—(1) That depends upon the breed and size of the colt, upon the quality of the hay and the kind and quality of the other food. (2) That depends upon the kind and quality of the other food, upon the size and breed of the animal and upon the temperature and the season of the year. (3) Good, sound oats and good, clean and sweet hay. Not knowing your colt, I cannot state the quantity in quarts and pounds, and only say, feed as much as the colt can comfortably digest; but not so much as to give to its dung an offensive smell. (4-5) That depends altogether upon the breed and development of the animal. If your colt has an "awful" stomach, you probably feed more hay and less grain than is good for the animal.

Nail in the Foot.—W. H. J., Altmas, Cal. As the case is now, provided the animal is not yet an incurable cripple, the best you can do is: to cut away all loose horn; to make a thorough examination of the extent of the destruction; to dress the sore and damaged parts until a healthy reaction sets in, twice a day, with absorbent cotton saturated with a solution of corrosive sublimate (one part) in distilled water (1,000 parts), or nearly one grain to every two ounces of water; and to protect the sore and raw surfaces by judicious bandaging. After the lameness has disappeared, and new horn is reproduced again, some resinous tincture (tincture of aloes will answer) may be used instead of the corrosive sublimate solution; and then a shoe with a cover of sheet iron, as described in a former number, may be put on. With such a shoe, the horse then will soon be able to work.

Rhachitis.—G. J., Jackson, Cal., writes: "Can you tell me what is the matter with my colt? Some few weeks since one of her hind legs became weak at the pastern joint, accompanied by an enlargement of the lower part of the upper pastern bone. The other leg begins to show the same symptoms. The colt is six months old, of trotting stock, but reared by hand. Can you tell me the cause of her weakness and what treatment you would recommend?"

ANSWER:—The cause probably consists in unsuitable food, food too poor in lime salts, and wanting, perhaps, other necessary constituents. Since the colt is six months old and can eat grain, I advise you to feed plenty of oats, some bran, good clover hay, etc.; and give good well water, or at any rate good hard water to drink. The disease seems to be rhachitis. Hay grown on irrigated fields is, as a rule, not suitable.

May be Tuberculosis.—B. C. T., Fresno, Cal., writes: "I have a cow that has a hacking cough, especially so after I feed her. If she lies down soon after being fed, she will breathe very hard, and acts as though she could not get her breath. She seems well in every other way, except that she has a few lumps on her back, about the size of a marble; but they have not broken as yet. I feed her all the alfalfa hay she will eat, and about two quarts of bran at each meal. She has a good appetite, and gives a good quantity of milk. I have a good, clean stable, and have her tied with a long rope so she can have out-door exercise at any time."

ANSWER:—The hacking cough is a little suspicious, and possibly may be due to tuberculosis. An examination by a competent person is necessary. As to the hard breathing, it may be due to the same cause as the cough, but it is also possible that it is simply caused by the too voluminous contents of the stomach. The left side of a cow, particularly of one that gets away with a good deal of food, is always fuller, at least in cows not with calf, because the large, first stomach has its place on the left side.

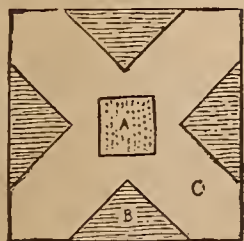
An Abscess in the Mammary Glands.—J. H. H., Arlington, S. Dak., writes: "I have a three-year-old mare which had a colt last summer. In July the colt got the distemper so bad that it could not suck. The mare's bag swelled, in spite of our milking, and broke, and pus began to run. We have veaned the colt and dried the mare, but still the pus keeps running out of an opening at the base of outside of left half of bag. Everything we have done so far seems to avail nothing."

ANSWER:—To what degree of health the diseased half of the mammary gland can be restored depends upon the extent of destruction produced. To effect a healing, you will have first to make a thorough examination of the abscess cavity. This done you will have to see to it that the pus or discharge can flow off from every point, and therefore may have to correct or enlarge the opening, or may have to make a new one. This will depend upon the result of your examination. After this is done, you may fill the whole abscess with absorbent cotton, saturated with a five-per-cent solution of carbolic acid, and renew this dressing twice a day until the abscess closes and healing sets in. That the parts must be kept clean may not need my mentioning.

Navicular Disease.—T. L., Moosie, Pa., writes: "I bought a horse last July, and he was supposed to have been sweeneyed and had been blistered on his shoulder, which caused him to be very lame. I saw that the skin on his shoulders was loose, and that he threw his fore leg forward, just resting it on the toe, and the hoof of that leg being considerably smaller than the rest. It is his right fore leg; and as far as I can learn in the 'Handy Horse Book,' I took it to be navicular disease. I took off his shoes, and turned him to pasture without any treatment whatever. He soon improved and is almost well; but he seems just a little lame, and has been like that for quite a while. Could I not put a strap around the pastern; I mean the hollow just above the hoof? Would it not do it good, as a strap around a sprained wrist or ankle is a good support? I thought it might help him, as I would like to have him at work by spring if possible, or could I do anything else for him in any way? This is my second attempt, and I hope this will not find its way to the bottom of the waste-basket."

ANSWER:—Navicular disease is an incurable ailment, and you ought to be satisfied with the improvement that has taken place. A strap around the pastern can do no good, but might cause, especially if rather tight, considerable damage. If you have written, or intended to write to me before, the letter may have been misdirected; at least, none has reached me. Only letters that contain nonsense and without a signature or are illegible, go into the waste-basket.

Cutaneous Eruption.—J. A. N., Martin,



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We will furnish 20 designs for beds of flowering plants, with full instructions showing names of varieties and number of plants required to fill fine show beds at a cost of from 15 cents to \$1 each. It requires knowledge and taste, not wealth, to possess elegant beds of flowers. Think of a fine bed all summer for a few cents! These designs mailed, with **Vick's Floral Guide**, for 1891, on receipt of 10 cents. Now is the time to plan. Send at once.

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JOHN A. SALZER, LA CROSSE, WISCONSIN.

Idaho. If the weather permits, wash your horse thoroughly with soap and warm water; then, before he is perfectly dry, apply a good wash with a two-per-cent solution of carbolic acid. Repeat the last application two or three times, at intervals of three or four days. Clean and disinfect your stable and stable utensils.

Diseased Hoof.—M. V. D., Moiser, Oregon. The new hoof, undoubtedly, is misformed and composed of abnormal horn; the animal, therefore, is incurable. If the malformation of the hoof permits shoeing, some relief may be afforded by judicious shoeing; but the shoes must be reset at least once a month, because in that time the hoof will require a little trimming and paring. The rest must be left to the judgment of the horse-shoer.

Heaves and Scratches.—L. C. D., White House, Tenn., and H. J. K., West Dryden, N. Y. Your sorrel horse has heaves, an incurable, chronic difficulty of breathing. Some relief can be given if the animal does not receive any tame hay; but instead of it give good oat straw and sufficient quantities of grain. Voluminous food, at any rate, must be avoided; and especially costliness must be prevented, for it will increase the difficulty. If the animal is kept in the stable, the latter must be clean, well ventilated and not too warm. The best remedy and particularly the best preventive against so-called scratches, which are simply children of neglect, consists in keeping the feet and legs clean. As medicine, a mixture of liq. subacetate of lead (one part) and olive oil (three parts), may be applied three times a day, and will soon effect a cure.

Abrasions.—G. H. B., Scranton, Pa., writes: "My horse has bruised and skinned his leg from above the hock down to the ankle. I washed it off with hot water and applied arnica and vaseline to the abrasions; second day applied vinegar and worn-wood to keep down inflammation, which is apparently controlled. Was this my best treatment to control fever, remove lameness, and heal the sore spot, and will you please give instructions for treatment in such cases, of which there are many?"

ANSWER:—As the adage says, there are many roads leading to Rome, so the same object may be reached by various means. Therefore, if you meet with the desired success, I have no criticisms to make, although I must say, my treatment would have been a more simple one. I would either have used strict antiseptics; for instance, a five-per-cent solution of carbolic acid, or iodoform, which would have kept down the inflammation, or, under circumstances—according to the nature of the case—a mixture of liq. subacetate of lead (one part) and sweet oil (three parts).

A LIBERAL OFFER.

Dr. J. M. Willis, a leading and reliable physician, of Crawfordville, Ind., offers to send free of all expense by mail, to all who send him their name and address, a box of Pansy Compound, a positive cure for constipation, dyspepsia, biliousness, nervous or sick headache, blood poison and chronic disorders. You should send a two-cent stamp.

NICK'S MAX-I-MUS
HORSE AND CATTLE POWDER.
FOR HORSES—It has no equal for DISTEMPER, Heaves, Loss of Appetite, Cough, Fever, Pink Eye, WORMS, Roughness of Hair, etc. FOR CATTLE—It increases the Quantity and Quality of MILK.
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Mention this paper when you write.

THE NEW TOMATO!

From Canada ought to be extra early, and as such it is sent out. The reports of the experimental stations speak highly of it, and numbers testify to its earliness, productiveness, large size, roundness, rich color and freedom from rot. Per package, 15 cents; five for 60 cents. You will find it only in my seed catalogue, which will be sent FREE to anybody.

J. J. H. GREGORY & SON, Marblehead, Mass.
Mention this paper when you write.

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Our Fireside.

SINCE NELLIE WENT AWAY.

The homestead ain't ez bright an' cheerful ez it used to be,
The leaves ain't growin' half so green upon the maple tree—
The brook don't seem ter ripple like it used ter, down the hill—
The babolinks appear ter hev a some'at sadder thrill;
The wavin' corn hez lost its gold, the sunshine ain't so bright,
The day is growin' shorter jest ter make a longer night;
There is somethin' gnawin' at my heart I guess hez come to stay;
The world ain't been the same to me since Nellie went away.

The old piano over there I gave her when a bride—
It ain't been played upon but once since she took sick and died;
An' then a neighbor's girl come in an' struck up "Old Black Joe,"
An' "When the Swallows Homeward Fly," an' some-how, don't you know,
It almost made me crazy, wild with anguish an' despair—
I saw her sittin' at the keys, but knew she wasn't there,
An' that is why I never want to hear the old thing play—
The music don't sound natural since Nellie went away.

The parson tells me every man hez got ter have his woe—
His argument is good, perhaps, for he had orter know—
But then it's hard for everyone ter allers see the right
In turnin' pleasure into pain an' sunshine into night;
I guess it's all included in the Maker's hidden plan—
It takes a heap o' grief an' woe ter temper up a man.
I sympathize with any fellow when I hear him say,
The world don't seem the same to him since some one went away.

The scripture says that, in His own sweet way, if we but wait,
The Lord'll take our burdens an' set crooked matters straight;
An' there's a hope that all the grief an' aching heart can hold,
Will be offset by happiness a hundred million fold,
When we hev reached the end o' life's eventful voy'ge at last,
An' all our pain an' misery is buried in the past.
An' so I'm lookin' for'ard to the dawnin' of a day
When mebbe it won't seem so long since Nellie went away.

—Harry S. Chester, in Chicago Herald.

THE NUGGET OF GRUB-STAKE GULCH.

BY JAMES OTIS.

CHAPTER III.

A LYNCHING BEE.

IT was a strange, sinister spectacle which met the gaze of Alice as she emerged from behind a fringe of bushes lining the edge of the gulch, and stood in full view of an enormous cottonwood tree that was nearly surrounded by a surging, yelling mob of men.

One glance was sufficient to make plain all that had been obscure in Conestoga Joe's statement.

Standing with his back against the huge trunk of the tree was Seth, one arm outstretched to level a revolver at those in front of him, and the other supporting a young man about his own age, whose pale face was stained here and there with blood. The stranger's hands were tied behind his back, and his general condition told bow roughly he had been handled before anyone interfered to prevent this mockery of justice.

Appalled by the scene before her, Alice stood silent and motionless several seconds as if unable to break the spell of terror which bound her, and in that short interval she heard, as if in a dream, her brother shout:

"If you pledge your words that he shall have sufficient time to prove the truth of his story, I guarantee he remains prisoner in town until the facts can be ascertained."

Facing the speaker were forty or fifty men, each with a weapon in his hand, and, ignorant as the motionless girl was of the lawless customs of a mining camp, she understood that but one word was necessary to provoke the slaughter of both the accused and his defender.

"What better proof can you have than to find him ridin' the hoss he stole?" the foremost of the party cried angrily, as he coolly proceeded to knot a noose in one end of a lariat.

"He says that while prospecting he fell in with a stranger who rode the pony on which you found him; last night the other fellow lit out, taking his horse and leaving the broncho. If he was guilty would he have ridden a stolen animal back to the very place from which it was taken?"

"But he did do it," one of the mob replied, "an' you know what the rules of this 'ere town are. We've got nothin' agin you, but some-

body'll drop if that hoss thief ain't hung up to dry mighty soon. Leave him with us an' there'll be no row; but—"

The sentence was finished by the speaker's raising his revolver, and this action caused the remainder of the party to rush forward with angry yells and hoarse commands for Seth to step aside.

"You'll have to shoot quick to prevent my sending at least five bullets among your cowardly crowd;" and Seth moved in front of the stranger as if to shield him with his body.

"Give it to him, boys!" the leader of the mob shouted, his voice literally trembling with anger. "Sball we let a tenderfoot make us take water?"

So inflamed were the passions of the men that the struggle would have been begun and ended very quickly but for Alice, who, thinking only of her brother's peril, forced her way through the crowd to the very foot of the tree.

In an instant every weapon was lowered, and involuntarily the men fell back several paces.

"Go home!" Seth cried. "This is no place for you; it is impossible to say what may happen in the next few seconds."

"Then so much more the reason why I should stay where I am;" and Alice, speaking without a tremor in her voice, stepped lightly to the side of the accused man, close beside her brother. "These gentlemen will not shoot at a woman."

"Perhaps not," the leader of the mob snarled; "but when one interferes with what don't concern her, she must take her chances. Come on, boys, are you willin' to let the hoss thief go free because outsiders happen to take a fancy to him?"

"You must not stay here," Seth said in a low tone. "The men are ripe for any mischief, and it is not safe to remain. Go while there is a chance."

"That's the way to talk," a voice close beside Seth added, and looking around the young man saw the proprietor of the Palace. "You take her away for the sake of the town if you bin' more. Think of what the boys at the Creek will say if we haven't got sand enough to hang a hoss thief."

Mr. Grant's tone was so imploring as to be pathetic; the honor and good reputation of St. Julian were dear to him, and to see both thus tarnished by the whims of those who



had so lately been distinguished by the elitzens, almost brought the tears to his eyes.

Alice understood now, as well as did Seth, that nothing could be accomplished by force, and she changed her tactics immediately.

Still standing where she partially protected her brother and the half insensible prisoner, she said pleadingly to Conestoga Joe:

"Mr. Grant, if for no other reason, won't you, as the greatest possible favor to me, aid in saving this man's life until it is known positively whether his story be true or false? To preserve the reputation of St. Julian for fair play, give him the opportunity. If he is guilty I will make no protest at whatever punishment you choose to inflict, and if he is innocent you will thank me that a foul murder was not committed."

"I stand willin' to do all in my power, Miss Hammond," Joe said with a very low bow and a majestic wave of his right hand; "but you see how set the boys are, an' it'll take more'n me to put an end to the festivities."

"Then I appeal to all the gentlemen" and Alice stepped forward a few paces. "In this camp I have been so kindly received that there can be no question anyone will refuse the first favor, and the only one I will ask. Allow my brother and myself to take this stranger home; we will be responsible for him, and I pledge my word there shall be no attempt at escape."

Then, without waiting for a reply, and realizing how much might be accomplished just at this moment by prompt action, she took the wounded man by the arm, whispering to Seth as she did so:

"It can be done before the worst men in the crowd have time to urge the others on."

Seth grasped the situation quite as quickly as had his sister, and he followed her suggestion without delay.

The mob fell back as if hardly conscious of what they were doing, when the two moved forward, half carrying the accused between them, and no move was made to prevent the departure.

"We'll know where to find him," Bill said in a significant tone, as the man with the rope began to harrangue the mob, "so what's the use of raisin' a row now. Seth's sister is grit to the back-bone, an' if anybody wants to say a word agin her, let him yip afore we break up, when I promise more fun than could be had outa a dozen sprees like this."

Since Bill was known to be a man who was ready to fight on the least provocation, and seldom missed his aim, no one cared to accept the implied challenge, and Conestoga Joe did his share of the peace-making by saying:

"There'll be free drinks at the Palace for the next thirty minutes."

This was like pouring oil on the troubled waters, and with a common impulse the entire throng made all possible haste to reach the saloon before the specified time should expire.

On the road the men met the rescuers with their burden, for the stranger was now wholly unconscious; but the trio were unmolested. Those who would have lynched the prisoner despite Alice's presence, were deterred by the many who openly avowed their intention of aiding her, and the thirsty party hurried on,

up so easy; I saw a feller what carried away seven bullets; but that was mostly the fault of them as were firin' at him. I hate a man who bungles a job like that; one shot oughter be enough for any decent feller."

Alice walked swiftly on, hardly conscious of where she was. The thought that through her efforts a human life had been saved lent a certain fictitious strength to her limbs; although on the verge of exhaustion she still kept pace with the men. If at that moment she had been asked to describe the alleged horse thief it would have been impossible for her to give even a general idea of his appearance; the fact that he had been rescued from a felon's death, alone occupied her mind.

Arriving at Seth's home, the unconscious man was laid on the canvas couch which Alice's brother claimed as his own, and Bill began a rough but reasonably skillful search for the bullet all knew must be in some portion of the sufferer's body.

"It's jest as I thought," the miner said, after a brief examination. "The man who fired the shot oughter be kicked for poor shootin'. The ball went in here (pointing to a small wound over the third rib on the left side), an' has come out on his back where the prick of a pin will settle it."

In this case the "prick of a pin" was quite a vigorous slash with a keen-bladed knife, and the leaden missile dropped to the floor.

"Is the wound dangerous?" Seth asked.

"Not a bit of it. I'd take two jest like it for the sake of havin' your sister 'tend to me, an' you kin bet your pile that I wouldn't git well any too soon."

With a certain rough tenderness Bill bound up the wound with bandages hastily prepared by Alice, and when this had been done the invalid showed decided improvement.

Opening his eyes he looked around curiously, and asked in a low tone:

"How does it happen that I am here? Where is the mob?"

Bill replied before Seth could speak:

"The boys are fillin' up down to the Palace, an' you are here 'cause one of the handsomest girls in this section of the country, who don't understand what a mean sneak a hoss thief is, stepped in an' stopped their fun. But don't think everything has been smoothed over. If your story ain't proved, up you go higher'n a kite, an' all the pretty faces in the world won't save yer."

The invalid closed his eyes as if to shut out that scene by the cottonwood tree, and after waiting a moment to learn if he would make any reply, Bill said to Seth:

"I reckon there's no reason why I should lose the fun they're havin' over to the Palace. This feller is safe here so long as he don't try to dust, an' I'll see you agin in the mornin'."

To leave the house it was necessary he should pass through the room where Alice was waiting until the stranger's wounds had been dressed, and to her questions Bill replied:

"Don't waste any time on that chump; he'll be 'round lively enough in a couple of days, which is more'n could a' been said if Joe hadn't made a fool of hisself by comin' for you."

"I wish to thank you, Mr. — Mr. —"

"Bill is all the name I go by, Miss."

"I must thank you for rendering me such a great service;" and Alice held out her hand, the miner taking it as if it was some fragile thing which could be easily broken, as he asked jealously:

"Did you ever see the tenderfoot before?"

"Never; but it was enough to know that he needed the aid of good men like yourself."

Bill actually blushed, a thing which he had not probably been guilty of for many years, and replied quickly:

"Don't bet too much on my goodness, Miss, for you're sure to lose. Why, the boys here say I salted the claim I sold Seth."

"I might have believed such a story but for what has happened this evening. Now I know there was nothing dishonest in the transaction."

"We won't talk about that," Bill said, with evident embarrassment. "If it should turn out that the feller here didn't steal Jake's pony, you'd better advise him to make tracks for the East jest as soon as he kin straddle a saddle."

"Why?"

"Because he's sich a blamed fool that the lightning's sure to strike him the first time he

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Conestoga Joe delaying only long enough to lift his hat to the lady, for it was absolutely necessary he should be among the first to reach the Palace, otherwise considerable damage might be done to the property.

Bill was about to follow the others, he having been forced to halt for an instant when Mr. Grant made his elaborate salute; but one glimpse of the girl's face checked him.

Now that all immediate danger was passed, nature began to assert herself, and Alice looked hardly less weak than the man whom she was bravely trying to support.

"I reckon I'll take a hand in this 'ere job myself," Bill said as he stepped to her side. "Let me get a grip on him, Miss, an' you toddle on ahead; you ain't lookin' fit to help a sparrer."

She yielded her place, and nothing save will power enabled her to continue the walk.

"These tenderfeet scare easy," Bill said contemptuously, as he shouldered considerably more than half the burden. "If he'd had any sand in him, you'd had some help in standin' the boys off."

"The poor fellow is wounded," Seth replied. "The blood on his face comes from a few scratches; but his shirt is saturated."

"I reckon some of the crowd plugged him when he fust showed fight;" and Bill spoke as if the matter was hardly worth his attention. "It would be kinder rough on us if he went under 'fore the boys get through with him."

"Unless we can stop the flow of blood soon there will be little hope for him."

"These kind of cattle don't turn their toes

shows his nose out of doors. I'll be 'round in the mornin' to see how the chump is gettin' along."

Not until after these words had been spoken did Bill release his hold of Alice's hand, and then he hurried away as if believing he had done something of which he should feel ashamed.

CHAPTER IV.

RECTIFYING THE MISTAKE.

On the morning after the proposed lynching bee, Seth began to realize that he had taken upon himself a heavy responsibility.

Instead of showing signs of recovery, as Bill had predicted, the stranger was in a high fever, and required even more attention than could be bestowed upon him. As yet, St. Julian did not number a physician among her inhabitants, and the nearest medical aid that could be procured was at the railroad junction, seventy miles away.

Alice was virtually an invalid, and if she should be obliged to play the part of nurse, it would have been better that she had never come to the Gulch; but yet someone must take care of the stranger, and after considerable thought Seth decided he alone ought to perform the task.

True to his promise, Bill called early in the day to learn how the alleged horse thief was progressing, and with him came Conestoga Joe. That either of the gentlemen had any very absorbing interest in the man, whom a short time previous they tried to hang, is highly improbable; but the visit gave them an opportunity of seeing Alice, which was not to be neglected.

"I loved the chump didn't have much sense," Bill said, as he and Mr. Grant were ushered into the room where the sick man lay, and before Seth's sister made her appearance; "but who'd thought a little thing like what happened last night would a' knocked him over?"

"My experience with tenderfeet has been that the best of 'em are a poor set. Why, the last one what struck this town would a' found fault with the refreshments at the Palace, if Jake hadn't given him a hint that it might be unhealthy;" and Mr. Grant looked at the unconscious man with an expression of deepest scorn. "This feller's a little the worst specimen I've ever seen. What a pity we didn't settle the whole matter last night."

"It strikes me that it is very nearly settled, more especially unless we can induce a doctor to come here," Seth replied, just a trifle angrily.

"I wouldn't put myself out to get one for a chump like this," the proprietor of the Palace replied, thoughtfully; "but in a town that's got the boom St. Julian has, we oughter have something of the kind around. Say, Bill, who did the shootin'?"

"I don't know; three or four of the boys took a crack at him."

"And this was the best they could do? We shall be disgraced at the Creek if it leaks out that a tenderfoot lived after more'n one had the drop on him;" and Mr. Grant spoke in a tone of sincere regret.

Seth was about to make some criticism regarding their lack of sympathy, when Alice entered the room, and during the next few moments the visitors were oblivious to everything save her presence. Conestoga Joe, who had indulged in the luxury of a second clean shirt in two days, thereby causing his hoon companions to accuse him of trying to be a "howling swell," went through a series of wonderful contortions in welcoming her, and Bill tried, with very poor success, to copy his every movement.

"I am glad you came," she said, too much occupied with the condition of the stranger to be amused by the extravagant gestures of her guests, "for you can help me convince Seth that there is no reason why he should neglect his work in order to take care of the sick man."

"Of course there isn't," Mr. Grant replied, promptly. "Pump a little whiskey into him now an' then, an' the tenderfoot will get along all right."

"I don't think that the proper treatment," said Alice, thoughtfully; "but I can take care of the gentleman, with a little help from Seth during the night, and he need not—"

"You?" both the visitors cried in surprise.

"Certainly. My brother thinks I am not strong enough; but it can do me no harm—"

"Seth is dead right," Mr. Grant interrupted, as he shook one fat finger impressively. "It's clean agin reason that you should spend your time on a boss thief. Better let the boys settle him, an' then there'll be no more bother."

"I am confident he did not steal the pony," and now Alice spoke quite sharply. "One glance at him is sufficient to show he is a gentleman, and unused to rough life. Very likely he was here prospecting or to buy land."

Bill turned away with a gesture of mingled pity and scorn. That such a pretty girl should waste her breath in defence of a fellow who allowed himself to be overcome by a trifling wound and the mild excitement of the attempted lynching, was what he could not understand. Mr. Grant, however, was aroused to something resembling interest in the stranger by her words. He remembered the quarter section he was intending to stake off into town lots, in order to be prepared for the coming boom, and the idea that the wounded man might possibly be a purchaser caused business instincts to momentarily extinguish the flame of newly-kindled love in his heart.

"What's his name?" he asked, eagerly; and Seth replied:

"I suppose we can find out by searching his clothes; but I thought it best not to do that until two or three were present, so there could be no chance for him to say I had gone too far in trying to learn what he may have wanted to keep secret."

"He'd better not so much as think of such a thing while I'm 'round," Bill said quickly, and Mr. Grant began the search as if the stranger's wishes were not to be considered for a single moment.

A thorough examination of the person and clothing of the delirious man revealed the fact that his name was Edward Morey, and he had probably come to make investments, since there were nearly two thousand dollars in his money-belt. Where he lived or where he was bound could not be ascertained.

"I declare, it don't seem as if a fellow with so much cash would steal an ornery pony like Jake's," Mr. Grant said, when the search was concluded. "It wouldn't be a bad idee for some of the boys to look around a bit, an' perhaps they'd find his hoss."

"But what are we to do for him in the meanwhile?" Alice asked.

"He's got money enough to pay for what's needed, so we'll see about gettin' a doctor, an' the boys shall take turns lookin' out for him. I'd come myself, if husliness didn't interfere, for it can't be anything but a soft snap to loaf where there's so much youth and beauty to be seen."

A languishing look and a profound bow to Alice told for whom the compliment was intended, and Bill, determined not to let his companion have any advantage, said quickly:

"I reckon it won't hurt me to hang 'round to-day, though it ain't likely there'll be very much to do till the pill-maker comes."

"I may want to call on you later," Seth replied; but just now I can afford to take a breathing spell, more especially in view of the fact that the claim is not paying him money at present."

Bill looked up furtively to see if there was any apparent intention on the part of the speaker to reproach him for the late transaction in land; but failing to detect the slightest semblance of a sneer, he said:

"All right. Me an' Joe'll talk the matter over, an' see you agin."

It was evident that Mr. Grant had intended to prolong his visit; but when Bill literally helped him out of the room, he could not well offer any objections, and was forced to take his departure.

He waited long enough to take leave of Alice in what he intended should be an affectionate and impressive manner, however; and as the two walked rapidly away, with many a backward glance, he said, in an outburst of confidence:

"Bill, I've pretty nigh made up my mind to marry Seth's sister. How trade would boom with her a' settin' in the Palace as cashier!"

It was several seconds before Bill made any reply, and then, stopping suddenly as he seized Mr. Grant by the shoulders in order to look him full in the face, he said with great emphasis:

"There may be more'n you have made up their minds in the same way."

"What! You?" the proprietor of the Palace cried, in astonishment.

"You can't say a hoss will buck till you're in the saddle," was the sententious reply, and Mr. Grant burst into a perfect paroxysm of laughter, greatly to the irritation of his friend, who added sharply, "Perhaps you think you're pannin' out big; but I ain't takin' a back seat for anybody in this 'ere town, an' don't you forget it."

The walk to the Palace was finished in almost perfect silence, and during the remainder of the day more than one of Mr. Grant's patrons wondered why the worthy proprietor and Big Bill were so frigidly ceremonious toward each other.

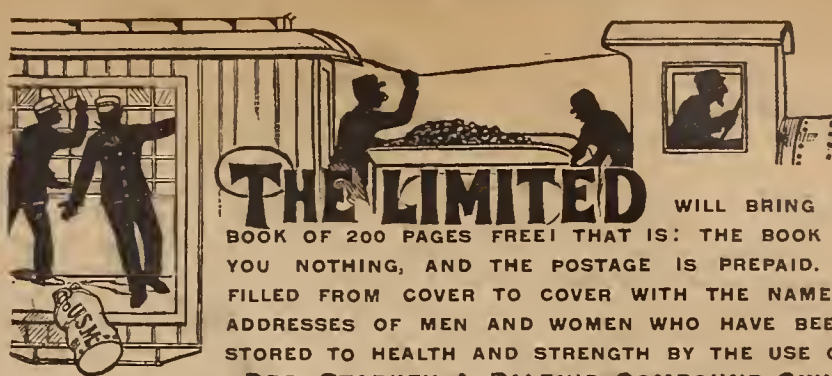
A belief in the possibility that the stranger might be innocent was rapidly gaining ground in St. Julian, owing to the eloquence of Conestoga Joe, who saw in Morey a purchaser of some portion of his quarter section; and several volunteered to go in quest of a physician. Little Bill, so-called because of his abbreviated stature and to distinguish him from the large gentleman of the same name, was selected by the proprietor of the Palace as the one to go on the charitable mission, and after being presented with a flask of "Joe's best," received the following instructions:

"Let your pony out and ride like sin. If the doctor chap won't come peaceable, bring him. We want people to understand that when the town of St. Julian sends for anything, they are bound to have it, dead or alive."

Some of the gentlemen present thought that Mr. Grant's orders were a trifle too severe, since a dead physician would be of but little service to the invalid; but when this suggestion was offered the worthy proprietor absolutely refused to listen to it.

"I tell you, boys, we've got to show some indications of sand, or St. Julian never'll get a boom on. If the doctor comes dead, he'll do to start a grave-yard with, an' that's what we're needin'. They've got a dandy over to the Creek, with a claim-jumper, two hoss thieves an' a tenderfoot in it."

This was a powerful argument which none could combat, and Little Bill rode away at full speed, resolved to carry out his instructions to the letter.



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Two hours later Mr. Grant made another call at Seth's home; but this time he appeared anxious to avoid being seen by Alice. He was laboring under considerable excitement, and asked hurriedly when Seth opened the door:

"Do you remember what kind of a hoss the stranger said he owned?"

"A big roan, with one white foot and a slit in the left ear. Why do you ask?"

"Nothin' partic'lar," Mr. Grant replied, evasively. "Some of the boys 'lowed it would be a good idee to look around a bit, that's all."

"Have you found him?" Seth asked, as the gentleman was on the point of leaving.

"If we had there wouldn't be any reason to come here for the description. How's Mr. Morey gettin' along?"

"Improving, I think. Fortunately, my sister had a small stock of medicines with her, and we have succeeded in reducing his temperature."

"Oh, yes. But say, what's your idee in reducin' him? I didn't 'low he was over and above strong anyhow."

"I mean that we have lessened the fever, and now there is every reason to believe that he will improve rapidly. Did anyone go for a doctor?"

"Little Bill started two hours ago, an' you can bet on seeing him back before noon to-morrow. Give my most distinguished regards to Miss Alice, an' tell her I count on callin' agin this evenin'."

Then Mr. Grant walked rapidly away as if afraid Seth might try to detain him, and the latter, his suspicious as to the true reason for the visit not sufficiently aroused as to cause him to investigate the matter, returned to the sick man, who was beginning to show signs of consciousness.

Not until a late hour in the evening did the proprietor of the Palace fulfill his promise in regard to making a third visit, and then he called Seth out of doors before attempting to pay his respects to Alice.

"We've found Morey's hoss," he said, in a hoarse whisper.

"Where? When?"

"In town here this afternoon. The same feller as stole Jake's pony rode in as if he owned the whole place."

"Was he here when you came to me for a description of the horse?"

"Yes; but I didn't 'low you should know it then, for the boys wasn't in the humor to stand any foolin'."

"What do you mean by that?" Seth asked, excitedly. "Has there been another lynching bee?"

"I reckon that's what it might be called. We've started our graveyard, an' it won't be long now before St. Julian will have more frills than the Creek."

"Good heavens, man! Didn't the fact that you came very near killing an innocent person last night prevent a repetition of such lawless work?"

"There wasn't any mistake this time. The sneak confessed, so that made everything straight. We give him a bang-up funeral, an' the boys are over to the Palace drinkin' his health. I don't reckon there's any call to explain the little affair to Miss Alice, eh?"

"Certainly not," and Seth spoke very emphatically. "If murders are to be committed with the sanction of the inhabitants of this town, by all means keep the fact a secret from her as long as possible."

"See here, Seth," Mr. Grant said, in a fatherly tone, "I'm a friend of your'n, an' feel it's my duty to give a bit of advice. Don't talk about murder when the boys are 'round, for a rope is the only law we can count on out here, an' if it wasn't used when it's needed, this would be a mighty tough place."

Mr. Grant brought the conversation to a close at this point by walking into the house, where he greeted Alice with all the dignity one might expect to find in the proprietor of such an establishment as the Palace.

[To be continued.]

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Our Household.

HIS OLD YELLOW ALMANAC.

I left the farm when mother died, and changed my place of dwellin'
To Daughter Susie's stylish house, right in the city street.
And there was them, before I came, that sort of scared me tellin'
How I would find the town folks' ways so difficult to meet.
They said I'd have no comfort in the rustlin' fixed-up throng,
And I'd have to wear stiff collars every week-day right along.

I find I take to city ways just like a duck to water;
I like the racket and the noise, and never tire of shows;
And there's no end of comfort in the mausion of my daughter;
And everything is right at hand, and money freely flows,
And hired help is all about, just listenin' for my call;
But I miss the yellow almanac off my old kitchen wall.

The house is full of calendars, from attic to the cellar,
They're painted in all colors, and are fancy-like to see;
But just in this particular I'm not a modern feller,
And the yellow-covered almanac is good enough for me;
I'm used to it, I've seen it 'round from boyhood to old age,
And I rather like the jokin' at the bottom of each page.

Like the way the "S" stood out to show the week's beginnin',
In these new-fangled calendars the days seemed sort of mixed),
And the man upon the cover, though he wasn't exactly winnin',
With hangings and liver all exposed, still showed how we are fixed;
And the letters and credentials that were writ to Mr. Ayer
I've often, on a rainy day, found readin' very fur.

I tried to find one recently; there wa'n't one in the city.
They toted out great calendars in every sort of style;
I looked at 'em in cold disdain, and answered 'em in pity,
"I'd rather have my almanac than all that costly pile."
And, though I take to city life, I'm lousesome after all,
For that old yellow almanac upon my kitchen wall.

—Ella Wheeler Wilcox, in the Century.

HELPFUL HINTS.

The ACCOMPANYING model for keeping eggs warm will be a welcome addition to any house-keeper who must keep the table waiting for late comers.

The foundation basket is of rushes (just the ordinary splint will do), the covering is of green wool and intermixed with gold; it is begun in the middle of the bottom and worked round and round in chain loops. The inside of the basket is lined with flannel. Strips in double crochet in white wool edged with picots, form the separate receptacles for each egg. The edge is finished along the rim with a row of flat balls.

APRONS.—Our model is of sheer India linen with insertion and edge of very heavy torchon lace; it is gathered several times at the waist line and fastened to a flat piece underneath to stay it; cord and tassels finish it at the top.

LETTER-RACK.—Any boy can make the



BASKET FOR KEEPING EGGS WARM.

foundation of this in light-weight wood. It is then covered with plush, trimmed with a piece of art embroidery, or it can be a handsome ribbon. It is a very useful receptacle for letters till answered.

UMBRELLA-CASE.—A receptacle separate from the hat stand is advisable, for unless well taken care of the umbrella is often maimed or mislaid. It should be well dried, then wound up so the silk will not cut, and placed in the case.

Any kind of embroidery may be used upon it. CHRISTIE IRVING.

HOME TOPICS.

CARAMEL CAKE.—Again the school girl has brought me a recipe, and when the product was eaten at our Sunday night tea, all voted it good enough for the readers of the FARM AND FIRESIDE.

To make the cake, cream one third of a cup of butter with one cup of sugar, add the yolks of two eggs, beat together five minutes; add one cup of milk and two cups of flour, prepared with baking-powder; flavor with vanilla and lastly add the whites of the two eggs beaten to a stiff froth. Bake in three layers.

To make the caramel, take two cups of brown sugar, one cup of milk and one tablespoonful of butter. Boil this together until it is waxy, but not hard enough for candy. Remove it from the fire and beat until it cools and thickens so it will spread nicely on the cake, but do not let it get cold. When the cakes are cool, spread the caramel between the layers and over the top. It will be smooth and glossy on the top, like icing.

A CARNIVAL OF NATIONS.—Church aid societies, relief corps, temperance societies, etc., often find it necessary to devise some means of raising money other than by voluntary contribution, and a new idea in the way of an entertainment proves more successful than the more common fairs, festivals and suppers.

I will describe the Carnival of Nations, recently held by our relief corps, which was a decided financial success and will



CASE FOR UMBRELLAS AND PARASOLS EMBROIDERED IN FLAT SATIN AND CROSS STITCH.

aid in making many a poor family more comfortable during the winter.

Fourteen booths were arranged to represent, by flags, decorations, dress of the attendants and articles exposed for sale, as many different nationalities. The American, French and Swedish were in the supper room. The American furnished the main supper at one table, of which baked beans, pumpkin pies and doughnuts were the chief attraction. The ladies in attendance wore dresses of the colonial period. The French booth served ice-cream, and the Swedish, in their quaint costumes, served a lunch which was a very unique affair, as it was composed of national dishes, all daintily prepared and served. The English booth had a display of fine embroideries and textile goods; at the Persian, perfumery and flowers were offered, and refreshing draughts of lemonade were ladled out by the fair attendants; at the Spanish, dusky-eyed señoritas sold grapes, raisins, nuts, tropical fruits and olive oil; next to this was a representation of the frozen north, Russia, with a fine display of furs, rugs, etc., and farther on Scandinavia offered, not only every variety of household articles in wooden goods, but some exquisite wood carvings. The German booth, presided over by red-cheeked, flaxen-haired fraus and frauiliens, was headquarters for dolls of every conceivable style; Greece and Italy had a display of fine art work, paintings, etc., not the least attractive feature being the young girls in Greek dresses; the Swiss booth sold candies and at the Gypsy booth fortune telling was the chief attraction. The Turkish booth was

very attractive with its oriental cushions, hangings, rugs, pillows, etc., and its veiled attendants. China, Japan and Corea combined to make a very attractive booth where bric-a-brac and curios were very tastefully displayed. The attendants were dressed in the costumes of the countries they represented, and so good were the representations that you could hardly believe they were not veritable almond-eyed beauties from the land of the Celestials.

This carnival lasted five nights, and every night there were three or four tableaux displayed. Among these were: "The Goddess of Liberty Crowned her Heroes," "Oriental Tea Drinking," "Vestal Virgins," "In the Spinning Room," "A Bride on the Starburet—Bridal Procession in Hardanger," "Shakespeare Reading His First Drama to Queen Elizabeth," "Italian Street Scenes," and many others that were very pretty. On the last evening a brilliant sight was presented by the grand international march, in which all those who had dressed in costumes took part.

Of course, this program can be varied to suit time, place and facilities at hand, but from these suggestions no doubt a very pleasant and profitable entertainment could be given without very much trouble or expense. It is surprising what elegant costumes can be made from cheese cloth, canton flannel, cretonne and silesia with the help of silk or crape shawls and lace shawls and scarfs, which can be utilized in so many ways; and with the aid of pictures and a little ingenuity very satisfactory results may be accomplished.

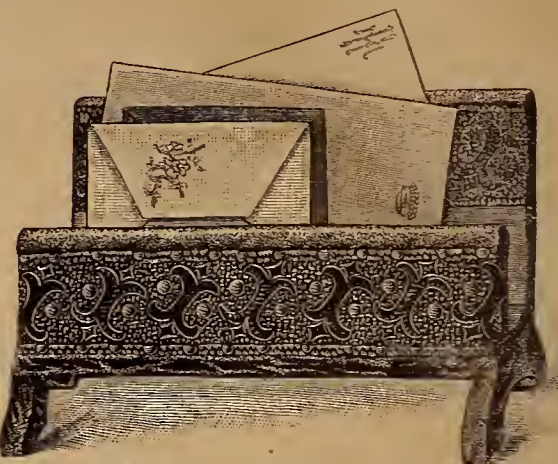
MAIDA McL.

GOOD BREAD.

I can tell you why those people who make very nice hop bread fail in salt-rising, and vice versa. I was two years in learning to manage both kinds, for they require very much difference in handling. First, you must have good yeast. In the hop, some prefer home-made, bottle yeast, others, the yeast cakes, of which I like the brand "Yeast Foam" the best. In this bread, the sponge is set the night before baking day, and put where it is kept warm, not hot.

In salt-rising, the yeast is set in the morning. A quart of boiling water, and when cooled down to 125° or 130° Fahr., add one teaspoonful of sugar, one half teaspoonful of salt and one fourth teaspoonful of soda, and flour enough to make a stiff batter; beat very thoroughly and set where the yeast may be kept more than warm, almost hot, in fact; but do not scald it. With an ordinary fire a warming closet or tin oven is the best place. If your stove is without these conveniences set the dish of yeast inside a larger one, and fill the space between with water which may be kept warm by adding a little more hot water as often as necessary to keep the temperature about 130° Fahr. Notice this first difference. Hop yeast, rather too cool than too hot. Salt-rising, rather too warm (not scalding) than too cool. If salt-rising yeast sours, let it alone; no power on earth can do anything with it in the bread line; mix it with sour milk and use it for pancakes or biscuit, using a little more shortening than if the wetting was all milk. Sour salt-rising yeast is easily told, the bubbles are all about the same size, it looks light but does not raise any more, there is a funny acid smell. In good yeast, bubbles are of all sizes, strong smell of yeast, but nothing acid about it and when once on the raise, it comes quickly, and stops for nothing, not even the top of the dish, hence requires close watching in about five or six hours from the time of setting. If at any time you should see water standing on top of the yeast, stir in more flour (you did not get enough in at first), beat thoroughly again. Some flour seems to thicken quicker than other. When the salt-rising yeast is light, prepare the sponge by scalding a pint of flour with as much hot water as you wish for wetting; when cooled to the temperature of the

yeast, add it, and flour to make a stiff batter; put where it will be as warm as before and when this has raised, it is ready to be kneaded into loaves. Notice the difference now. Use flour enough to make about as hard as cookie dough; then take off enough dough for one loaf at a time and knead it with as little flour as can be used, and not have it stick to the



EMBROIDERED RACK FOR LETTER PAPER, PHOTOS, ETC.

board. Of course there must be flour enough so you can handle the dough without too much sticking; knead quickly, and when the little blisters begin to show on the surface and the loaf feels smooth and velvety under your hand, it may be put in the tin. Don't overdo the matter, as a young friend of mine did, and roll it up as soft as cookie dough without the proper kneading, thinking if it were softer, the better; she would certainly beat her "missus." It should be kneaded until the blisters show, and feels smooth; and no more flour used than is necessary for this. It should be done as rapidly as possible to keep the dough from being chilled by long standing away from the fire; and think one can do it better to take off a loaf at a time, and will not be in danger of getting in too much flour. In the morning, when your hop yeast is light, sift in all the flour you think necessary; mix up quickly, and it should be hard enough to knead on an unfloured molding-board for ten minutes without sticking. If it sticks, add more flour, until you can knead it without the flour on the board.

Here is the great difference. In hop yeast, use all the flour the sponge will take up. In salt-rising use as little as is necessary to give the proper kneading.

When the hop yeast loaf is sufficiently kneaded (it should also feel smooth and velvety under the hand), place it back in the bread-pan, and when three times its original size, cut off into loaves, handling as little as possible, and using no more flour. Think it is better to roll the dough one way, as too much twisting and turning at this point injures the grain, and the bread will not be flaky as you see the bakers' bread always is.

In hop bread you have these stages: Sponge at night, large loaf, loaves in the



INDIA LINEN APRON.

tin. In salt-rising you have: The yeast, sponge, loaves in the tin. Now both are ready to raise for the last time; when double their size, put in a hot oven, and the salt-rising will be done in three fourths of an hour, and the hop bread in one hour. A great deal of success lies in the baking. A fire should be started long enough before the bread is ready to go in the oven, so that the oven may be sufficiently heated to arrest the rising process at once, and then an even, steady fire kept up. Salt-rising bread is turned out from

the tins and covered tightly with the bread-cloth. Hop bread is turned out, and a wet cloth should be rubbed all over the upper crust before it is rolled up in the bread-cloth. This wetting the crust makes it more tender. Any help or advice will be gladly given to anyone desiring the same.

GYPSY.

The valentine I'd send thee, dear,
Not only now, but all the year
Is, that thy life may ne'er be troubled,
And all thy choicest blessings doubled.

SWEDISH EMBROIDERY.

As bags of every description are so much in vogue, we give something quite new in the way of their adornment.

This one is made of pale, brown leather with applications of cloth, in moss green, pale blue and a reddish brown.

The band all around and across the middle is of green; the large discs and three-pointed leaf, and the small discs at the corners and along the middle band is of the blue; the large points and small discs across the top are of the brown.

The green is held on by a waving line of silver thread couched on with white silk; the large points and discs of brown are held by gold thread.

Small spangles of silver attach it in the center. The knots in the large discs are made of silver cord in French knots. The tassels are of silver, and the strings of green cord.

C. I.

LET US REST.

Not long ago I saw a pretty piece of fancy work. "I will describe it for the readers of the FARM AND FIRESIDE," I thought, but while examining it there came to my soul an utter revulsion of feeling. "No," was my final decision, "I will tell them to let fancy work alone!"

After Charles Lamb had spent thirty-two years of his life in a routine of business, he was retired on a pension. He wrote of his coming leisure with exultation. He said, "I shall stroll about as purposeless as an idiot."

The phrase strikes one by its novelty. We laugh at it. We think it over. The more we ponder, the more we like it. No thought of the past, no care for the future; no repentance over sins, no resolutions for good works. No attention to the fact that our clothes are shabby, no planning for new. Not a care as to what we shall have for the next meal. No canning of fruit. No fancy work. Rest, perfect rest! Better than rest! Strolling about out of doors, taking in the sunshine, breathing in the clean air. The picture makes idleness desirable.

But why should an idiot monopolize these benefits? Is it wise to be careworn? Does it prove our good sense to be troubled about many things? Have you not noticed that the women who have the most wealth—consequently the biggest houses, the finest furniture and all the things women imagine they need—are the very persons who have no free, joyous, "purposeless," hours? This thing of anxious care is a habit, and its opposite may become one which it would be well for us to cultivate.

I may be mistaken, but it seems to me that fancy work adds to a woman's care.



SACHEL—SWEDISH APPLICATION.

She cannot positively rest, physically, while she keeps her ten fingers in motion sewing or knitting; and if the object in hand involves any measurement it demands exercise of the brain as well. Then there is the excitement of wishing to get it done, the strain to accomplish a certain stint.

Certain women say if they can daily take a nap of only ten minutes it proves a great refreshment. If we could gain this

"purposeless" mood it would be as beneficial as sleep, perhaps more so; for while our faculties were lying free, unexercised, they might be open to the chance influence of some happy, outer touch, as the eolian harp responds to the passing breeze and gives forth unexpected and exquisite music.

Let us rest.

KATE KAUFFMAN.

FASHION BITS FOR THE GIRLS.

For home wear, girls are making very lovely aprons of silk, muslin or white wool, trimmed with lace and bands of Roman embroidery, or embroidered in butterflies in outline.

* * * * *

For the neck trimming of home dresses, collars formed of velvet flowers laid one over the other, and matching the tint of the dress.

A pansy veiling will have a circlet of purple and yellow pansies stitched down upon the neck band. For a black dress, sprays of holly and berries, on white forget-me-nots, and roses on pale blue or purple violets.

* * * * *

On a great many of the prettiest dresses there is a marked use of black velvet ribbons, in knots, streamers and loops.

The fancy, too, of loops of ribbon at the neck is again revived.

The color of all colors this winter is turquoise blue, bright pink and corn color.

The most elegant evening dresses are of broadcloth trimmed with the same material in pale colors.

Ostrich feathers as a trimming are used more than ever; arranged upon a piece of net and worn as a plastron, they make a very effective accessory to wear with a black toilet.

* * * * *

Full, deeply-quilled ruches of illusion, dotted with chenille, are brought on for the neck, but they are only intended for house wear. Some ladies show their poor taste by wearing them outside a cloth jacket for street wear. Lace and fluffy accessories should only be used for house wear and dressy occasions. Linen should be worn with cloth or fine bands of silk.

Broadcloth for dresses comes in all shades. From pale pink, corn color, scarlet to all the deeper shades of color. They are very wide and are \$2.50 and \$3.00 per yard. Seven yards is the greatest abundance for a dress.

Handsome serges in all colors are \$2.50 a yard. No wool dress wears equal to this. It is far more desirable than silk. Buttons made of the dress material are much used; they range in price from 25 to 40 cents per dozen, made to order. From three to four dozen are used on a dress. Up the front of the waist, on the coat-tail backs, on the inside seams of the arm from wrist to elbow. For a business dress serge is unsurpassed, and a good one ought to last a year.

For dresses of soft materials the bottom of the skirt is finished with a wide puff, the upper skirt cut in squares or points to fall over this, the edges being bound with the material.

Plaids and high sleeves are in high favor.

A very deep poke hat, with not much back to it, trimmed up the back with black plumes and a little touch of yellow, a black feather band around the rim outside and a gold cord underneath, formed part of a very stylish costume.

Everybody this winter tried to have a shoulder cape. They are very desirable, as they can be thrown off in a warm house easily, which is an improvement on the sealskin sacque. The better qualities come from \$20 to \$40, and should be a good fit to look well. With the high collar coming up to the ears, and a big hat worn with them, a pretty girl looks unusually pretty and a plain one more attractive.

LOUISE LONG CHRISTIE.

INQUIRIES ANSWERED.

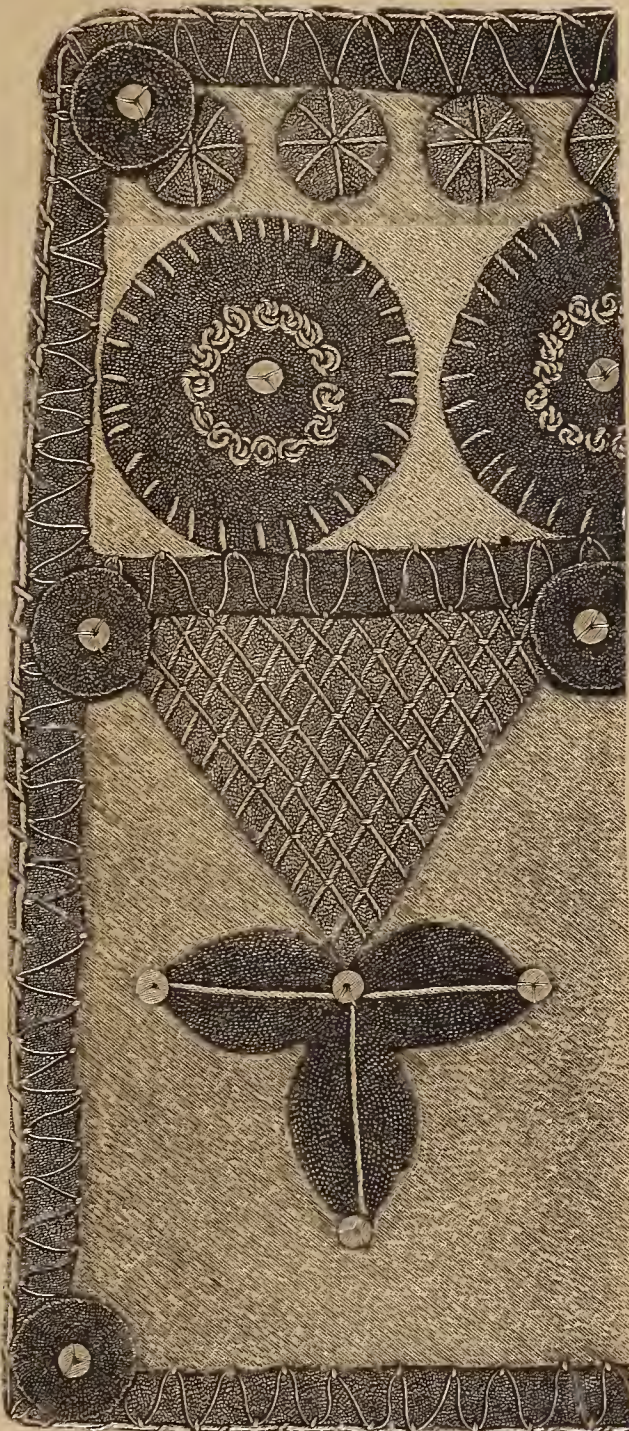
To PICKLE PORK.—Cut the pieces about four inches wide in strips. Turn them round in a stone jar and cover with salt; alternating a layer of meat and a layer of coarse salt. Let it make its own brine. Cover it and it will keep well.

To MIX WATER COLORS.—There is no way except to use the water and the paint. You must soak your water color paper so as to have it damp to receive the paint.

TUBE ROSES.—These bulbs should be kept in a warm place. They will not bloom until they are three years old.

DYEING.

Perhaps no art is of more value to the country housekeeper than a knowledge of how to dye and renovate old clothes. "Dyeing" is the ever ready resource of a slender wardrobe," says a noted writer on economical matters, and we have found it so. It is an art well worth learning; by



PIECE OF PATTERN IN SWEDISH APPLICATION FOR SACHEL.

its use long-worn garments, rusty from wear, can be restored and remade to last yet longer; or new ones of delicate colors, injured by acids, wine or fruit stains, can be readily renewed. Light colored stockings, no longer fashionable, can be given rich dark or black shades; silk lace or ribbons too yellow for wear, feathers injured seemingly beyond reclaiming, gloves soiled and faded, can all be made to look new.

All woolen goods dye well. Silk, while it never looks quite as well as when new, can be very nicely colored so as to answer many purposes. Irish poplins color well, but usually shrink considerably. Half-worn fabrics of a dark color, may be bleached so as to take light coloring by dipping in a bath of chloride of lime, then well rinsed. In coloring, care must be taken to do the work properly. Soft water is best, and plenty of it should be used. The dyeing should always be done in a vessel of sufficient size to spread out the goods. Before beginning to color, all grease and dirty spots should be removed from the garments. They should be well scoured with soap and water and then rinsed and dipped in warm, clear water.

Many country housekeepers prepare dyes at home; but this is a great deal of trouble and is mistaken economy. The various prepared dyes kept by all druggists, aside from their convenience, do the work more satisfactorily and are cheaper.

The color card accompanying each package of dye will show the exact shade wanted; and with care, any woman can soon learn to color with these dyes equal to professional dyers.

Many-times, persons wishing to dye are at a loss to know what colors will dye various shades best. For the instruction of such we annex the following:

Light green will dye pretty shades of brown, crimson and black; light blue will dye dark blue, crimson, purple and green; brown will dye crimson, dark green and black; drab will dye scarlet, purple, blue, crimson, green, stone and black; lavender, mauve, light pink and gray will color any darker shade nicely; dark browns, blues, green and black, if dingy and faded, can be renewed by dipping in dye of the same color.

ELIZA R. PARKER.

CO-OPERATIVE HOUSEKEEPING.

Theories are good, but practical demonstrations are so much better, that we are glad to give our readers the benefit of the experience of some Decatur (Ill.) householders, in their experiment with the co-operative housekeeping system. Fifty-two families of comfortable income banded together; a kitchen and necessary help were secured, with a paid housekeeper to oversee the cooking and serving. Then each housewife (of which there is one for each week of the year) takes her turn for a week in superintending the housekeeping—buying the supplies, arranging the menu for the week, keeping the accounts, etc. So far, all has worked like a charm; the husbands are satisfied, as the total cost for service and supplies, including all the luxuries of the season, is but \$2.50 per week for each person; the wives are equally well pleased, since it relieves them for fifty-one weeks out of the year, from all the housekeeper's cares and responsibilities, leaving them ample leisure for self-culture and the gratification of their individual tastes and ambitions, besides, what is still more important, time to devote to the training and educating of their children. Of her newly acquired liberty and opportunities, one woman wittily says: "In this way a woman can serve her week as head of the house, and take a trip around the world, if she wishes, before her turn to housekeep comes again." Verily, a new era has dawned for housekeepers and housekeeping.—S. I. M., in *July Good Health*.

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USEFUL FOR HOUSEKEEPERS.

TABLE OF MEASURES.

Two pepper-spoonfuls make one salt-spoonful.
Two salt-spoonfuls, one coffee-spoonful.
Three teaspoonfuls, one tablespoonful.
Four tablespoonfuls, one wine-glass.
Two wine-glassfuls, one gill.
Two gills, one cupful.
Two cupfuls, one pint.
Twenty-five drops of liquid make one teaspoonful.
One tablespoonful of salt, one ounce.
One tablespoonful (heaping) of brown or granulated sugar, one ounce.
Two tablespoonfuls of powdered sugar, one ounce.
One heaping tablespoonful of sifted flour, one ounce.
Three tablespoonfuls of grated chocolate weigh one ounce.
One quart of sifted flour weighs one pound.
One pint of soft butter weighs one pound.
Two coffee-cups of powdered sugar weigh one pound.
One and one half coffee-cups weigh one pound.
Two and a half cups of brown sugar weigh one pound; of lump loaf sugar, one quart is one pound.
Ten ordinary-sized eggs make one pound.
Twenty-five pounds of dried apples make a bushel.
Sixty pounds of dried beans make one bushel.
Thirty-three pounds of dried peaches make a bushel.

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Our Household.

OUR PUBLIC SCHOOLS.

As a class, there is no other than our school teachers who make more earnest effort to know their duty and do it; and as a class there is no other so little appreciated or assisted by its patrons. It is safe to say one half their energies are spent in counteracting the effects of defective home training, order and obedience being necessary to the dissemination of knowledge. Without obedience there can be no order, without order there can be no attention, and without attention instructions are wasted, no matter how efficient or earnest the teacher. What does it benefit if our teachers are graded or trained to the highest order of education, if they must spend their time in training the children under their care to the first principles of obedience? Take, for instance, some children who at home never obey without the fear of a whip, whose sensibilities have never been exercised above the mere physical impulses—all the higher faculties dwarfed. To endeavor to apply the refined principles of education to such a mind is like trying to polish metal without the grinding process to smooth down the coarse features.

Therefore, if we would receive the full benefit of the abilities of our public school teachers, we should, as parents, do our part in training and fitting our children to receive the instruction.

Disobedience and insolence are demoralizing, and unless overcome in the school the whole institution must suffer the bad effects. Often parents who have been neglectful of their duty will oppose the teacher's efforts, thus making more ineffective the already almost fruitless task. It is because of these conditions that our teachers fail so often in results, which they have every qualification to attain, were the conditions favorable. This is a grave matter for parents to consider, one that should find a place in every Alliance for consideration. Every effort that intelligence can devise is brought to bear in the process of education. Should not something practical on the part of parents be also instituted to prepare the children to receive the benefits?

Am I my brother's keeper? Yes. So long as your children are thrown into intimate and daily intercourse with his, does not the moral and intellectual training of his children concern you? Whether or not you consider yourself responsible for his moral condition, does it lessen the effect? Did you withdraw your children from the public schools to avoid these influences? Will they not, when developed into citizenship, reach you in a more aggravated sense? Hence the law of self-preservation makes us our brother's keeper. It would be well for parents to meet sometimes with teachers and hear these methods of education discussed, and learn, too, the difficulties to be overcome. —M. J. Hunter, in *Kansas Farmer*.

WINTER BISCUIT.

Sometimes when we get tired of light bread, instead of making bread, I add a teaspoonful of butter or lard to the dough (about enough to fill a gallon crock); after it rises well, work it down and let it rise again; work it down again, then put away in a cool place, and when needed, roll out and bake just the same as any other biscuit, without waiting for them to rise, and be sure to have a brisk oven. These make most delicious biscuits, and the dough will keep sweet and grow better if kept in a cool place.

BISCUIT No. 2.—If anyone wishes a certain recipe for good biscuit, let them try this: Take three pints of flour and a heaping teaspoonful of soda, two of cream tartar, one of salt; sift all together, add a small handful of lard, and sweet milk enough to make a soft dough; roll out with as little working as possible, and bake in a quick oven. Very much more reliable than any baking-powder I have ever tried.

MUSTARD RELISH.—Put a pint of strong vinegar on the stove to boil, in a granite-iron kettle; mix with a little cold vinegar, two large spoonfuls of mustard, one of flour, two teaspoonfuls of sugar, one of salt, one quarter of a teaspoonful of cayenne pepper and boil all together.

LEMON HONEY.—Dissolve two cups of

sugar in the juice of two lemons, beat two eggs very light, add one cup of water and mix well; add a piece of butter the size of a small egg; cook till thick (about twenty minutes) stirring constantly.

LEMON PIE.—Take the juice and grated rind of a lemon, one cup of boiling water, one cup of sugar, one large spoonful of flour, yolk of one egg; dissolve flour in a little cold water and boil all together. Bake crust same as for cream pie and fill, when done, with the above mixture. Beat the white of an egg to a stiff froth, add sugar to taste, and spread over the pie and place in the oven for a minute until the egg is cooked.

APPLE MARMALADE.—Take some very tart variety of apples, pare, core and quarter them, and cook as for apple sauce. If not thoroughly cooked up mash them soft, and for each teacup of apples, add a cup of white sugar; cook rapidly, stirring all the time, for fifteen minutes, or until it looks clear and hardens when cold. After moving from the fire, flavor with extract of lemon, and put it in small, wide-mouthed jars or crocks. If done right it will be perfectly colorless and will slice off beautifully.

APPLE DUMPLINGS.—Pare good, tart apples, cut in half and remove the cores. Make a dough same as for soda biscuit; cut off a piece, about enough for a biscuit, and put two pieces of the apple together, fill the cavity with sugar, and with floured hands roll the dough around the apple tightly, and put in a baking-pan, leaving plenty of room for them to rise without touching each other; then put two spoonfuls of flour, a cup of sugar, a lump of butter size of an egg, all mixed up smooth with a little cold water, into a sauce-pan, add a few pieces of lemon peel or nutmeg, pour on boiling water, and when thin enough pour around the dumplings. Cook in a moderate oven for an hour, and add more water as the other boils away. Be sure and have enough of the sauce when done.

CO-OPERATIVE LAUNDRY.

About thirty years ago a co-operative laundry was organized by about fifty women in Chicago. It was a crude, blundering affair in which hand labor and machinery were equally used, but it was a success. The work was well done, both the expense and labor being reduced one half, and the work was brought to a satisfactory system. A few years since about twenty-seven families of my acquaintance combined, and assisted the intelligent washerwoman of a dozen of the households to organize, in her hired house, a laundry of very moderate proportions.

The woman was English, a widow, strong and executive, as were her two vigorous and willing daughters. With a small outfit of washing-machines, wringers, mangles, boilers, flat-iron heaters and set wash-tubs, these three women laundered for the entire twenty-seven families, returning the clothing to its owners in beautiful whiteness and smoothness by Thursday night of every week. For some they mended and repaired. Other families joined the organization, until it numbered thirty-eight. They would receive nothing to be laundered after nine o'clock Monday morning; they would have every piece of clothing out of their house by Thursday night. They purchased starch, fuel, bluing, soap and whatever else was needed, by the wholesale, thus getting the most for their money, and hired transient additional help when necessary.

Not only did these three women make a living, but they maintained a handsome account in bank, bought a three-story brick house, with modern improvements, in a desirable part of the city, which today yields the sisters a fair income; adopted an orphan girl baby, and reared and educated her to become a successful teacher, a comfort to them and a help to society. The business was continued till the death of the mother and the marriage of one of the sisters compelled its abandonment. This modest experiment reduced the expense of washing and ironing one third to the families interested, and took out of their houses all the labor, care and confusion incidental to the disagreeable work.—*Dress*.

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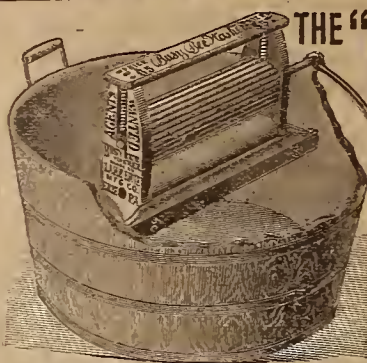
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Easy Payments, with no extra charge. **Mrs. Price** offers 30 Crescent Safety, ball-bearing \$8.75 Mercury Diamond Safety, all steel \$10.00 Springfield Roadster, leaders in mass " \$120.00 30 Amer. Champion, highest grade, " \$100.00 Others as cheap, all makes new or 2nd hand, lowest prices. Cash free. Rouse, Hazard & Co., 32 E St., Peoria, Ill. Mention this paper.

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Required Until After FULL EXAMINATION. **14K GOLD AND SOLID GERMAN SILVER.**

The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold, containing finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth basins, finished to a dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, this case contains nothing but gold and the finest quality of German silver and in fact it is in every way, except intrinsic value, equal to a \$50 solid gold watch. The movement is a fine 8-4 plate style, finely jeweled polished pinion, oil tempered main spring which does not break, and all the latest improvements. A guarantee is sent with each watch that it will keep accurate time for 2 years ordinary use. **OUR 90 DAY OFFER.** That all may have this beautiful watch in their own hands and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the express agent \$2.75 or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and send nothing on, but your time in going to the express office. Knowing the fine qualities of this watch we make the above offer, as any one wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address **WILLIAMS & CO., 125 S. Halsted St., Chicago, Illinois.** Always mention this paper.

Guaranteed Watch \$2.75.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Sunday Afternoon.

THE COMING GLORY.

Mid the splendors of the glory
Which we hope ere long to share,
Christ our head and we his members,
Shall appear divinely fair.
Oh, how glorious
When we meet him in the air!
Oh, what gifts shall yet be granted,
Palms and crowns and robes of white,
When the hope for which we panted
Bursts upon our gladdened sight;
And our Savior
Makes us glorious through his might.
Bright the prospect soon that greets us
Of that longed-for nuptial day,
When our heavenly Bridegroom meets us
On his kingly, conquering way.
In the glory,
Bride and Bridegroom reign for aye!

TALKING THAT IS TAKING.

NO MAN who can talk well, and has sagacity enough to use his gift for the advancement of his worldly interests, need ever be poor. To the inheritor of a ready-made fortune, conversational gifts are not, perhaps, a matter of much importance. Wealth is a special pleader which requires no assistance from art or nature to win consideration in society; and the veriest stammerer and blunderer that ever used the parts of speech need not despair of popularity and praise if he has had the luck to be born with a silver spoon in his mouth, instead of a silvery tongue. His money will speak for him, and to the purpose. Golden opinions are easily procured, if you have the gold wherewith to purchase them.

To him, however, who has to make his own way in the world, verbal magnetism (if we may use the phrase) is a wonderful assistance. Let the poor man thus endowed cultivate his faculty carefully and use it judiciously, and it will be sure to enrich him. If he has plenty of executive ability, as well as an agreeable fluency and a convincing way of putting things, so much the better. Hundreds of profitable and praiseworthy objects fall to the ground every year in consequence of not being placed in an attractive light by their originators.

Ferdinand and Isabella shook their heads at first at the idea of sending a squadron into unknown seas in search of a new continent, but Columbus talked them into it; nay, more, by the irresistible eloquence of inspired talkers the Christian religion was established, and were it not that they have been talked into it by earnest exponents of truth, thousands who are now voyaging towards a brighter and better world than Columbus gave to Castile and Aragon, would have missed the heavenward track.

GOD'S CHISELS.

Look at the artist's chisel. Most certainly it carves the statue. The artist cannot carve without his chisel. Yet imagine the chisel, conscious that it was made to carve and that it is its function, trying to carve alone. It lays itself against the hard marble, but it has neither strength nor skill; it has no force to drive itself in, and if it had it does not know which way it ought to go. Then we can imagine the chisel full of disappointment. "Why cannot I carve?" it cries. Then the artist comes and seizes it. The chisel lays itself into his hand and is obedient to him. That obedience is faith. It opens the channels between the sculptor's brain and the hard steel. Thought, feeling, imagination, skill, flow down from the deep chambers of the artist's soul to the chisel's edge. The sculptor and the chisel are not two, but one. It is the unit which they make that carves the stone.

We are but the chisel to carve God's statues in the world. Unquestionably we must do the work. Our hands must touch men's lives and save them. Our lips must speak the words that shall convict sinners of their sins, point penitent ones to the Lamb of God, comfort the sorrowful, put hope into the hearts of the tempted, the struggling and the weary toilers. The mother, the teacher, the Christian friend must carve the soul of the child into the beauty of the Lord. But the human worker is only the chisel of the great artist. The artist needs his chisel; Christ has chosen to use the human

hand. But the chisel can do nothing, produce no beauty of itself. The artist must seize it and the chisel must lay itself into his hand and be obedient to him. We must yield ourselves together to Christ and let him use us. Then his power, his wisdom, his skill, his thought, his love shall flow through our soul, our brain, our heart, our fingers. That is working by faith.—*Phillips Brooks.*

WHAT IS NEWS?

An ingenious editor of a large and successful daily, who would be recognized as one of the best newspaper men in the United States if his name were mentioned, recently had occasion to employ some new reporters. Many men applied, all of whom he called into his sanctum and, paying no attention to their letters of recommendation, gave each one of them a writing-pad, at the head of which was the question, "What is news?"

"Half an hour to answer that question, young gentlemen, then I shall know how to make my choice."

There was some lively scratching for thirty minutes, and the result of the newspaper examination was intensely interesting. Some of the answers of the successful competitors are suggestive. Here are a few of them:

"News is anything that the general public ought to know."

"News consists of events that are either very usual or very unusual."

"News is the daily record of the human race put into convenient shape for the public."

"News is the panorama of the world every twenty-four hours in embryo."

"News is whatever the public will read and pay for."

"News is anything from Jones' arrival in town to the fall of an empire."

"News is historical fact. It is what occurs; not what is imagined."

"News is the truth concerning men, nations and things. That is, truth concerning them which is helpful, or pleasant, or useful, or necessary for a reader to know."

This last definition pleased the editor very much. It is a serious question whether even a small per cent of what is commonly called "news" in our daily papers, would stand the test of that definition.

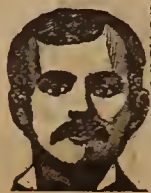
DO NOT BE A SLAVE.

Why will you keep caring for what the world says? Try, oh try, to be no longer a slave to it! You can have but little idea of the comfort of freedom from it—it is bliss. All this caring for what people will say is from pride. Hoist your flag and abide by it. In an infinitely short space of time all secrets will be divulged. Therefore, if you are misjudged, why trouble to put yourself right? You have no idea what a great deal of trouble it will save you. Roll your burden on him and he will make straight your mistakes. He will set you right with those with whom you have set yourself wrong. Here am I, a lump of clay; thou art the potter. Mold me as thou in thy wisdom wilt. Never mind my cries. Cut my life off—so be it; prolong it—so be it. Just as thou wilt, but I rely on thy unchanging guidance during the trial. Oh, the comfort that comes from this!—*Gen. Gordon.*

THE FIRST THING TO BE DONE.

It is sad to see with what unbelief the prophecies of our Lord are received; what little weight they carry to all out of the church, and to too many in the church. An unusual and prolonged darkness sets the whole world in a tremor, thinking that the whole world is coming to an end and that the day of judgment is at the door.

If the day of judgment is such a terror, and such a terror it most assuredly will be to those unprepared to meet it, would it not be the part of wisdom to make a preparation for it, the first thing to be done? It is a matter of little difficulty to those consenting to the terms, which are most liberal. A refuge is provided for all who will accept it—accessible to all—sufficient for all who will enter at once. To such, the judgment day, come when it may, will have no terror.—*Faith's Record.*



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PRACTICAL KNOWLEDGE OF THE ANCIENTS.

Rosilini, a celebrated hierologist, says: "Philologists, astronomers, chemists, painters, architects, physicians, must return to Egypt to learn the origin of language and writing; of the calendar and solar motion; of the cutting of granite with a copper chisel and of giving elasticity to a copper sword; of making glass with the variegated hues of the rainbow; of moving single blocks of polished syenite nine hundred tons in weight any distance by land and water; of building arches round and pointed with masonic precision, unsurpassed at the present day and antecedent by two thousand years before the Dorians are known in history; of fresco painting in imperishable colors, and of practical knowledge of anatomy."

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For Bilious and Nervous Disorders.
"Worth a Guinea a Box" but sold
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Automatic Bobbin Winder.
15 Days' Trial. Warranted 5 years. Self-setting needle, self-threading shuttle. Light-running and noiseless. All attachments. Send THE C. A. WOOD CO., for free 17 N. 10th St., Phila., Pa. circular.

Bermuda Bottled.

"You must go to Bermuda. If you do not I will not be responsible for the consequences." "But, doctor, I can afford neither the time nor the money." "Well, if that is impossible, try

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OF PURE NORWEGIAN
COD LIVER OIL.

I sometimes call it Bermuda Bottled, and many cases of

CONSUMPTION,
Bronchitis, Cough

or Severe Cold
I have CURED with it; and the advantage is that the most sensitive stomach can take it. Another thing which commends it is the stimulating properties of the Hypophosphites which it contains. You will find it for sale at your Druggist's but see you get the original SCOTT'S EMULSION."

Only \$10
"Down With High Prices."
THIS SEWING MACHINE
ONLY \$10!
Top Buggies, \$55.00 Harness \$7.50
Road Carts, 10.00 Wagons, 30.00
\$5.00 Family or Store Scale, 1.00
A 240-lb. Farmers' Scale, 3.00
4000 lb. Hay or Stock Scale, 40.00
Forge and Kit of Tools, 20.00
1000 other Articles at Half Price.
CHICAGO SCALE CO., Chicago, Ill.

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We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

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I DON'T WANT Long, Padded News Articles; The Padding Doesn't Add to the Value.

I DON'T WANT And I Haven't Time to Read them.

I DON'T WANT Fierce, One-Sided Editorials, Written by Special Pleaders, Who can see Nothing Good In any side but their own.

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ONLY \$1 A YEAR.

The WITNESS is just the paper for Farmers, Farmers' Wives, Farmers' Sons, Farmers' Daughters, Country Merchants, Country Store-keepers, Blacksmiths, Carpenters, Builders, Stone Masons, and all other laborers who form the backbone of our country and who want to be thoroughly posted in what is going on in the world.

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We offer to send the Farm and Fireside 24 issues, the New York Weekly Witness 52 issues, and the Modern Cook Book for \$1.30. See description of the Cook Book on another page.

John Dougall & Co., 150 Nassau St., New York.

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Guitars, Mandolins & Zithers
In volume and quality of tone are the best in the world. Warranted to wear in any climate. Sold by all leading dealers. Beautifully illustrated descriptive catalogue with portraits of famous artists MAILED FREE.
LYON & HEALY, CHICAGO.
Say where you saw this advertisement.

Gleanings.

JUST LIKE GROWN FOLKS.

Said little Grace to little Bess,
"I guess I'll make my doll a dress."
Said little Bess to little Grace,
"I think you'd better wash its face."
"Wash its face, indeed!" cried Grace—
In conscious wisdom she grew prouder—
"I'll do like grown up ladies do,
Just put on grease and lots of powder."
—New York Epoch.

RAZOR SORE.

"Yes," said a Pearl street barber as he was shaving me the other day, "we often have amateur shavers bring us their razors to be fixed up. Almost any man with a steady hand can shave himself, but not one in fifty can keep his razor in decent condition. The first reason is that amateurs wear all the temper out of their razors by excessive strapping, and the better the steel the easier it is affected in this way. The only remedy is to let it alone. Put away the razor that scrapes and cuts the skin and give it a good rest. Then use it again and in all probability it will be in good shape. Some of the modern shaving sets have as many razors as there are days in the week, and on the handle of each is engraved the name of a day. If the rotation is kept up very little sharpening is needed. I have known men talk of pet razors which they have used every day for ever so many years; if they would let those lie by for a while they would find a welcome improvement. The second cause of the trouble is bearing on the razor while sharpening it. You never want to attempt to put on an edge before shaving. When you are through, rub the blade a few times lightly on a plain leather strap, which need not cost above a quarter, and then put away. The old, boiling water craze is exploded now, and professionals do just as good work with cold water as hot.

BLACKING STOVES.

Every good housekeeper dislikes to see a grimy stove, yet often dreads equally the grimy hands acquired in the process of blacking. A pair of thick gloves is, of course, a necessary part of the outfit of any woman who does kitchen work, and yet desires, as she should, to keep her hands dainty. As a rule, far too much blacking is used on stoves. A cake of blacking, such as is sold for eight cents, ought to last a year for blacking one stove. If more blacking is used, it will not be rubbed into the surface of the stove as it should be, but remain as a fine dust, to be afterward blown about the kitchen and cause a generally grimy appearance, so often seen in uncared-for kitchens. A fresh coat of black should not be applied oftener than once a month, when the flues should also be cleaned out and the interior of the stove thoroughly brushed out. Before putting on new blacking, the old blacking should be washed off; the new coat must now be applied and the stove thoroughly polished.

The edges of the stove, if they are of polished iron, should not be blacked, but cleaned like a steel knife, with sapolio or brick-dust. The nickel knobs and other nickel parts of the stove must be rubbed bright with a chamois skin or old, shrunken flannel. An ordinary paint and whitening brush is one of the best things with which to apply blacking to a stove. A stiff brush, such as is used for this purpose, is the best brush for polishing. During the month, polish the stove with the polishing-brush each morning, just after kindling the fire. Keep an old cloth always on hand in cooking, to rub off any grease spot as soon as it occurs. If the spots are obstinate, a few drops of kerosene oil put on the stove-cloth will remove them. The ground edges and nickel work of the stove should be rubbed off at least once a week, besides the monthly cleaning when the stove is blacked.

FLORAL FASHIONS.

The chrysanthemum is in the ascendant, and very soon every house, flat or room will be illumined by its splendid bloom. This is one of the effects of taking Japanese art into our bosom. We have learned the decorative lesson and profited, for it would seem a flowerless autumn were we to be deprived now of this perfect bit of natural decoration. And another floral idea has also arrived from Japan, one which bids fair to rival

the more fragile creations of the greenhouse. Dwarfed trees, strange, stunted, gnome-like plants, set in the artistic, porcelain pots of that land of art and invention, will be used for dinner-table and house decoration. Already they are employing them in London houses, and no doubt in time they will appear here, superseding the familiar rubber plants and palm, and giving that one note of vernal oddity so prized by the tasteful owner of a well-composed room.

A NEEDED ACCOMPLISHMENT.

The gift of one good voice, clear enunciation, correct pronunciation, in every family, would raise the enjoyment of home life fifty per cent, if such valuation could be placed on so spiritual a family possession; the gain that would result in the increase of general intelligence to each family is incalculable. It seems a great pity that when so much money is spent on accomplishments that really minister to the student's development only, more attention is not given to the very desirable accomplishment of elocution; not that the student may recite in public, but that he or she may read in private for the common development of the intelligence of the family.—Christian Union.

THE BENEFIT OF COFFEE.

Dr. I. N. Love, of St. Louis, in a paper on this subject, said that his experience for five or six years past had been strongly in favor of taking a cup of strong, black coffee, without sugar or cream, between two glasses of hot water, before rising every morning, at least an hour before breakfast. The various secretions were stimulated, the nervous force was aroused; an hour later a hearty meal was enjoyed and the day's labor was begun favorably, no matter how the duties of the day and night preceding might have drawn upon the system. Another cup at four in the afternoon was sufficient to sustain the energies for many hours. In this way the full effect was secured. If, along with this, the proper diet were taken at the proper times—and the ideal diet for those who make large drafts upon their nervous systems and expected to have them honored, is hot milk—and at least eight hours of sleep were taken out of every twenty-four, one's capacity for work would be almost unlimited.

THE ART OF LEAVING.

When Mme. de Staël visited Weimar with the avowed intention of intellectually capturing the literary lions of the day—Goethe and Schiller—she made one fatal mistake; she stayed too long. Goethe wrote to Schiller: "Mme. de Staël is a bright person, but she ought to know when it is time to go."

The art of leaving is less understood by women than by men. The habits of business, the recognized fact that to a business man time is money, the throng and press and exactness of business life, all tend to make men who live in cities the best possible exemplars of the fine art of leaving quickly and neatly. A business man's social call is usually a model of good manners in this respect. When he has said what he has to say, and listened to what there is to hear, he takes his hat, says "Good-evening," and is out of your presence without giving any time or chance for the too-often tedious and embarrassing commonplaces of mutual invitations and promises to call again, which seem to be a kind of social formula with women. In striking contrast with this neat and skillful method of cutting short the parting word of an interview or call, is the too common social practice of visitors who, commencing to leave, seem temporarily to abandon their purpose, and then linger as though it was a kind of compliment to the visiting party to appear loth to part.

Who does not dread the visitor who starts, then thinks of something else to say; rises, and then thinks of another subject of conversation; nearly reaches the door, and most probably holding it open, is aroused to a degree of mental brilliancy that threatens his health and that of his host or hostess, by long detainment of both in a cold draught while he discourses? What a tax on the patience and politeness of the visitor, who vainly strives by assenting instantly to every proposition to end the interview and break the restraining bond of polite attention.

MAKING AN HONEST LIVING.

It is said that Mrs. Bonanza Mackay is advertising rewards for the detection of the person who circulated the infamous story that she once took in washing in order to make an honest living. There are lots of people like this. But think of it—a woman ashamed of having done honest work when poverty left no alternative save dishonesty. It is a sad thing, and a monstrous thing, too. The people, whose evolution from poverty to riches and honor has been due to faithfulness in small beginnings, are legion, and most of them are proud of it. Worcester has such people. One of its honored citizens today is a man who, when a boy, walked into Worcester with his brother. They had tramped all the way from Maine. They founded one of the most famous enterprises of the world and their name is known wherever civilization has extended the bounds of trade. One is dead now; he died honored and respected. The other still lives and is active in his business. He has represented his ward in the legislature; he has been an alderman; he has done good with his money. He, too, is honored and respected. Once he had not money enough to pay his fare into the city. Worcester glories in the spunk of boys like these and so does every true American. When a woman like Mrs. Mackay thus advertises herself as having reached the pinnacle of snobbery, it disgusts decent people and outrages the idea of the republic.—Light, Worcester, Mass.

SCRAPS.

Almost everyone has at some time of her or his life started a scrap-book; almost everyone has given it up after accumulating a mass of matter pasted in a chaotic manner in a book too large for use.

The collection of scraps on subjects in which we are interested is fascinating, and also very useful; so thoroughly has the advantage of such collections been recognized that there are bureaus in large cities which make a business of collecting scraps on any given subjects for you, culling them from all the papers, magazines and journals of the day. Some are interested in one thing and some in another—some in the tariff, and some in jewels—but all are supplied. Most of the great people of our time, or those who wish to consider themselves so, employ one of these bureaus to collect paragraphs which may be written about them: a plan which is really necessary to one who finds it important to know how he is regarded by the public. There are also people who make a business of arranging scrap-books, and who have a talent for doing this satisfactorily.

The only way to collect and keep scraps is to devote one book or receptacle to a special subject; and, indeed, there is a most excellent series of scrap-books published now, of a convenient size, and labelled with any subject you desire. You can thus have your books uniform, and an addition to your book shelves. You may collect articles on the woman or labor questions, on temperance, poetical selections; and many of the "strays" of the newspaper corners are among the sweetest gems in the language; or you may collect jokes—and an immense amount of pleasure can be found in a collection of good jokes.

If you have books devoted to your special subjects, small and easily handled, with your scraps put in with flour or photographer's paste, you have something which is handy for reference, and invaluable in its way for the purposes which specially interest you.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by address, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

1 WHISTLE WAIT FOR KATIE (by author of Anne Rooney, AND full sheet size; 10c. W. Thomson, 69 Dearborn St., Chicago, Ill.)

DREAM Book; tells the meaning of all your dreams. Latest published. Only 10c. LOCK BOX 774, CHICAGO, ILLINOIS.

200 SCHOOL DIALOGUES, RECITATIONS and Readings, Humorous, Dramatic and Pathetic. A choice collection, specially adapted for School Exhibitions, Social Gatherings and Public Entertainments. Nicely bound. Sent postpaid for only 25c. W. Thomson, 69 Dearborn St., Chicago, Ill.

BIRTH MARKS, Dangers, Pains, How Avoided in Childbirth; rear beautiful, healthy children: read "Painless Parturition." "Had I read this book ten years ago I would not be an invalid now."—Mrs. L. R. Price 50c. Address DR. CHAREST, St. Cloud, Minn.

AGENTS WANTED! For the **NOVELTY TYPEWRITER.** Invention of a mechanical expert in the Elgin Watch Factory. Practical, Instructive, Entertaining. Sample to agents, price 60 cents by mail. Circulars free. **NOVELTY TYPEWRITER CO., OSWEGO, NEW YORK.**

A FORTUNE

Can be made by energetic men and women selling our household remedies. We send \$25.00 worth of the fastest selling remedies in the world, to be sold on commission. No money to be paid us until the goods are sold by you. We employ only responsible persons. Write for terms. Address **FRANKLIN HART REMEDY CO., New York City, New York.**

A PRESENT.

* SEND us your address and we will make you a *
* present of the best Automatic **WASHING** *
* **MACHINE** in the World. No wash-board or tub *
* bing needed. We want you to show it to your friends *
* or act as agent if you can. You can **COIN MONEY** *
* We also give a **HANDSOME WATCH** to the *
* first from each county. Write quick. Address N. Y. *
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BEST STEEL WIRE **Woven Wire.**



WIRE ROPE SELVAGE the BEST.
PRICES REDUCED. Sold by dealers. **FRIGHT PAID.**
McMULLEN'S POULTRY NETTING. New thing.
No sagging! No bagging! Extra Heavy Selvage.
The McMullen Woven Wire Fence Co., Chicago, Ill.

LOOK 40,000 READ

WATCHES **MUST BE SOLD!**

Lot No. 3. Gents' Solid Gold Waltham, full jeweled, full engraved, stem wind. Only.....\$21.25
Lot No. 5. Gents' Solid Gold Filled Watch, full engraved, open face or hunting, stem wind, stem set, full jeweled, Waltham.....\$13.95
Lot No. 7. Ladies' Solid Gold Watch, double cases, full engraved, stem wind, ruby jewels, etc. A daisy. Only.....\$18.50
Lot No. 8. 8-oz. Dueber Stem Wind, fitted with full ruby jewels, nickel works, open face.....\$4.95
Lot No. 9. Silver Nickel Stem Wind, stem set, open face.....\$2.25
Lot No. 10. Nickel Silver Watch, key wind, open face.....\$1.85
Don't buy worthless brass goods from other houses when you can buy solid gold goods from us at less than half price. Every Watch is guaranteed. The Gold Watches are guaranteed for 25 years. Don't send any money until you see these goods, which will be shipped C. O. D. You can test them and examine at Express Office, and if they suit you, pay the Express Company, otherwise you pay nothing. If you are far from Express Office, send money with order, and we will ship free of charge.

THE CHICAGO WATCH CO.
142 Dearborn Street,
Capital Stock, \$130,000. **CHICAGO.**

\$500 CASH
25 SILK DRESS PATTERNS
30 GOLD and SILVER WATCHES
50 GENUINE DIAMOND RINGS
FREE! FREE!

We will give \$250 to the first person telling us where the word **MAN** is first found in the Bible; to the second, \$125; to the third, \$75; to the fourth, \$50; to each of the next five, **25 GOLD WATCHE**. To each of the next 25 persons a **Beautiful Silk Dress Pattern**. To the next 50 persons, a **Genuine Diamond Ring**. To the next 25 persons, a **Solid Silver Watch**; and to each of the next 100 a choice and valuable **Business or House Lot**. Answers must reach us on or before May 1st, 1891. With your answer send 25c. postal note or 30c. in stamps for a subscription to our illustrated 16pp. Paper, and our new Illustrated Catalogue of Watches, Diamonds, etc. Our May issue will announce the result of the contest, with names and addresses of the winners. This offer is made solely to introduce our Paper into new homes. Give full name and address.

HOUSEHOLD COMPANION.
119 & 121 Nassau St., New York City.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

500 Crystal Glass Water Sets Free

Splendid Premium Offers—Look for Water.

We are the publishers of a very popular 20 page, 80 column illustrated home paper. In order to introduce it into new homes we make you this **Grand Offer**. The person telling us the place in the Bible where the word **Water** is first found (book, chapter and verse) before May 15th, will receive a handsome **Parlor Organ**, valued at \$125.00. Should there be more than one correct answer, each of the next five persons will receive a beautiful **Parlor Organ**, valued at \$100.00. The next fifty persons will each receive a beautiful **50-Piece Tea Set**. The next ten persons will each receive a splendid **Family Sewing Machine**, valued at \$65.00 each. The next ten persons will each receive a handsome, 11 K. gold plated, hunting case **Watch**, stem wind and set, ladies' or gent's size. The next five hundred persons will each receive one of our beautiful **Crystal Glass Water Sets**. The next ten persons will each receive a handsome **Dress Pattern of Silk**, valued at \$3.00. With your answer send 25 cents (silver if you can, or stamps) for which we will send you our charming paper each month for five months. We make this **Grand Offer** simply to advertise our paper and secure new subscribers, that's the reason we give away these grand premiums, because we want new subscribers. Remember, you pay nothing for the premiums. The 25 cents is to pay for the paper five months. The premiums are given away to whoever gives us the correct answer. We guarantee satisfaction or money refunded. The premiums receiving the beautiful premiums will be published in the June Number of our paper. When you write us you saw our advertisement in this paper, and don't fail to enclose 25 cents for our paper five months. Address



Kirtland Bros. & Co., P. O. Box 3340, N. Y.

FREE.

Our Miscellany.

RESEMBLANCE.

When the roses are in flower,
Kissed by sun and kissed by shower,
Will I gather one for thee?
Roses red are like thy lips,
Pink ones match thy finger tips;
If a white one I can find,
'Twill be the emblem of thy mind.
Such a one I'll send to thee;
Wear it, sweet, and think of me.
—E. G. B., in *Young Ladies' Journal*.

LIGHT labor—Cleaning the lamps.
A CAPITAL fellow—The millionaire.

ENOUGH is always a little more than we have.

FOR A DISORDERED LIVER TRY BEECHAM'S PILLS.

PROVIDE a dry and comfortable shelter for calves.

SAVE the middle grains of the finest ears of corn for seed.

GRAY hair indicates that the hair-producing vessels are weakening.

WHEN the lips crack or chap apply, with a soft linen cloth, citron cream.

COCOA butter is used to nourish and soften the skin and to prevent sunburn.

GENTLENESS makes children endurable, women lovable and men admirable.

NEW YORK is still the leading dairy state of the union. Iowa stands a good second.

TIME is money, they say. And we have often observed that it takes a good deal of money to have a good time.

SALT will curdle new milk; so in preparing custard and porridges, salt should not be added until the last thing.

A LITTLE borax, put into the water in which colored napkins or bordered towels are washed, will prevent them from fading.

THERE are sixty-two national and international organizations of labor in the United States, according to the latest reports.

CARPETS may be greatly brightened by first sweeping thoroughly and then going over them with a clean cloth, wet in clear salt water.

AFTER all, the only real difference between laughing and crying is that in one case the corners of the mouth turn up, while in the other they turn down.

HE said to her—"The moon is always just the same, and yet I always find some new beauty in it." She said to him—"It's just so with the circus." He bought tickets for two.

HE—"What does the poet mean by an 'aching void?' I can't understand what it can possibly be." She—"Why, I should think you ought to know. Have you never had the headache?"

IT was Washington Irving who said that "with every exertion, the best of men can do but a moderate amount of good, but it seems in the power of the most contemptible individual to do incalculable mischief."

WHEN you make a mistake, don't look back at it long. Take the reason of the thing into your own mind and then look forward. Mistakes are lessons of wisdom. The past cannot be changed. The future is yet in your power.

A COLORED man named Frank Roberts has bought the mansion house of the late Alexander H. Stevens, vice-president of the Confederacy, and is fitting it up for his own residence. Mr. Roberts owns some of the finest business property in Marietta, Ga.

"Cheap Lands and Homes in Kentucky, Tennessee, Georgia, Alabama, Mississippi and Louisiana" is the Title of a Pamphlet Issued by D. G. Edwards, Cincinnati, Ohio, General Passenger and Ticket Agent Queen & Crescent Route, containing correct County map of these States. Mailed free on application, to any address.

NOTHING opens so wide a door to vice, to crime, to evil habits of every description, as the absence of occupation. The downward course of many a promising youth, the ruin of many a hopeful life, may be distinctly traced to the void caused by having nothing definite and positive to do. The faculties must be active, the energies must be at work, and if not employed for good, they will be for evil.

IT is comparatively seldom that an intimacy, capable of producing perfect sympathy, is formed between persons of very different ages. Every year changes, in some degree, the focus with which we look upon men and upon the world, and the degree in which they influence us. A blow which nearly kills a man at twenty only wounds him at forty, and at sixty hardly hurts him at all.

WESTERN cyclones are indeed curious things. The editor of the *Tomville Call* vouches for the fact that a cyclone blew into his office last week, threw the set type all over on the composing stone, locked up the forms, whirled them onto the elevator, jerked them clear through the press and printed seven hundred copies before the force could get control of the machine. And the only mistake in the whole thing was the misplacing of a patent medicine "ad" that ought to have gone "top col. next reading matter." "Bring on your cyclones," says the *Call*.—*Light*.

INTENTIONALLY MISUNDERSTOOD.

Chappie—"It's very disagreeable when a fellow goes into society to meet one's tradespeople."

Cynicus—"Why, they don't dun you before the company, do they?"

MRS. PARTINGTON IN MAINE.

The Maine Mr. and Mrs. Partington are still on deck. One lady just returned from Boston informs the neighbors that she "rode upstairs in a refrigerator and had her clothes washed at a foundry." A Maine man recently rose in a municipal meeting and solemnly announced that "for reasons unknown to himself he desired to resign." An old lady in Bath recently mortified her relatives intensely. At a grand dinner she overheard a lady guest politely answer to the wielder of the carving-knife that it was immaterial which portion she had. A luscious slice was passed up to her, and our old lady, after an appreciative glance, "guessed that she would have a small hunk off'n the immaterial."—*Lewiston Journal*.

SHOE BLACKING AND COLD FEET.

"When the leather in your shoes becomes old and begrimed with blacking, you will ascertain that the feet will be cold," remarked the old-time shoe-seller. "Then it is time to cast aside the shoes and use them to wear beneath arctics, or for some other purpose. I have seen it referred to many times; but if you want to keep your shoes in good condition you should use vaseline on them often. The life will be kept in the leather; and, if rightly applied, you can shine the footwear just as well as if the preparation had never been used. Put it on at night when taking off the shoes. There is castor and like oil, also, that will as well serve the purpose and keep your shoes and boots in good shape, imparting much greater warmth to the feet than if you allow blacking and the like to eat up all the life in the leather. When blacking commences to cake on the shoes, wash them with plain water, no soap."—*Shoe and Leather Facts*.

"RIVER, BY ORDER."

One of the annoyances of a commander's life is a subordinate officer who discusses orders and makes trouble, whenever he can do so and escape punishment. Of one of this class, whose tendency was to divide "a hair 'twixt south and south-west side," an amusing story is told in "Campaigning with Crook."

Colonel Royal, commanding a cavalry brigade, ordered this officer to "put that battalion in camp on the other side of the river, facing east." The officer marched his command to the spot, but, as Colonel Royal soon saw, instead of obeying instructions, began carrying out his own ideas. The colonel put spurs to his horse, dashed through the stream and reined up alongside of the officer.

"Didn't I order you, sir," he roared, "to put your battalion in camp along the river, facing east?"

"Yes, sir; but this ain't a river. It's only a creek," answered the hair-splitter.

"Creek, sir? It's a river—a river from this time forth, by order, sir. Now, do as I tell you."

TONY'S COMPLAINT.

Upon a certain southern plantation, before the late war, there was among the negroes an old man named Tony, whose duty it was to attend to a little over-shot mill, where was ground the meal used upon the plantation. He was a constitutional grumbler, never satisfied that he got his share of anything.

Between Tony and his master there existed a strong friendship; they had been playmates in boyhood, and Tony never failed to pour into his master's ear the tale of his real or imagined wrongs.

One summer an epidemic of fever broke out in the crowded Negro quarters. It prevailed for several weeks, and many of the servants died; but Tony's house was apart from the others, upon a high hill near the mill, and he and his family escaped the pestilence entirely.

One morning in the fall, after the epidemic had subsided, his master, sitting upon the gallery, saw Tony approaching, with his usual moody, dissatisfied expression.

"Well, Tony," he said, "what's the matter now? You've been so lucky in escaping the fever, I expected to see you happy for once in your life."

"Lucky?" growled Tony, "I don't see whar de luck is. Hyah's all dem other Niggahs been layin' up an' restin' in dey beds fur weeks an' munts, havin' mo' physic den dey could hole down, while I'se been grindin' stiddy on dat mill, an' me an' my folks aint even had our sheer uv de physic used on de plantashun."

A HANDSOME CATALOGUE.

The catalogues issued in the different branches of trade for 1891 show in many instances a decided improvement over those of 1890, high as the standard of excellence reached by some of them in that year was. It is a recognized fact that the seed trade leads all others in the beauty and cost of these publications. One now before us, sent out by Wm. Henry Maule, Philadelphia, Pa., well illustrates the truth of the above statement. We notice in glancing through its pages that last year Mr. Maule offered and paid \$1,500 in cash prizes for field and garden products raised from his seeds, and \$1,000 for the largest club orders for seeds sent him in 1890. He repeats these offers for the current year.

THE WATCH AS A COMPASS.

The following anecdote, taken from the *London Truth*, illustrates a use for a watch which will probably be new to most readers:

A few days ago I was standing by an American gentleman, when I expressed a wish to know which point was the north. Taking out his watch and looking at it carefully for a moment, he told me. I asked him whether he had a compass attached to his watch.

"All watches," he replied, "are compasses. Point the hour hand to the sun, and the south is exactly half way between the hour and the figure twelve on the watch. For instance, suppose that it is four o'clock. Point the hand indicating four to the sun, and two on the watch will be exactly south."

Thinking that very possibly I was ignorant of a thing that everyone else knew, and happening to meet Mr. Stanley, I asked that eminent traveler if he was aware of this simple mode of discovering the points of the compass. He said that he had never heard of it. I presume, therefore, that the greater part of the world is in the same state of ignorance.

BEEN WELL EVER SINCE.

MR. EDITOR.—Years ago I saw in your valuable paper an advertisement of Rev. T. P. Childs, claiming to have a remedy for Catarrh.

I sent at once for his treatment, and can say was entirely cured in a short time, and have never had return of the disease.

I would advise all troubled with Catarrh to at once secure this valuable remedy. Information as to mode of treatment and prices, can be obtained by addressing Rev. T. P. Childs, Troy, Ohio.

Very truly yours,
J. W. M. WITT, Cedar Bluff, Ala.



FREE SEEDS
OUR CATALOGUE OR SEED BOOK IS FREE ON APPLICATION. WE SELL
Supplies for Farmers & Gardeners
IF YOU SOW & REAP USE OUR TRUE BLUE SEEDS
WANT TO — A HARVEST — OUR TRUE BLUE SEEDS
40 YEARS EXPERIENCE
as growers have taught us how to produce seed, famous for quality, and how to please customers. We offer a new Tomato, Melon, Cucumber, Radish, etc., for 1891. Apply NOW for the SEED BOOK.
A W. LIVINGSTON'S SONS, Box 135, Columbus, O.

\$1.50 Worth 20 Pkts Garden Seeds for 50 Cts

IF YOU plant Ely's Seeds this year you will always want to plant them. In order to induce every one to give our seeds a trial we make this unprecedented offer, for 50 cts. in stamps or money we will send by mail, postpaid, one packet each of the following valuable seeds: New Dwarf Lima Bean, grows without the aid of poles, Early Blood Turnip Beet, Early Jersey Wakefield Cabbage, White Plum Celery, fine quality, attractive, New Honey Sugar Corn, the sweetest corn grown, Early Green Cluster Cucumber, Perpetual Lettuce, tender and crisp, Emerald Gem Muskmelon, sweet, spicy, delicious, Green and Gold Watermelon, flesh beautiful orange color, Mammoth Silver King Onion, grows three-pound onions from seed first year, Improved Guernsey Farnip, Coral Gem Bouquet Pepper, a novelty very ornamental, Japanese Pumpkin, the best for pies, Chartier Radish, best summer variety, White Pineapple Squash, excellent quality, Volunteer Tomato, early and excellent, New Zealand Fig Tomato, splendid for making figs, Extra Early Munich Turnip Vegetable Peach, fine for preserves. Sample packet Golden Beauty Corn, deep grain, small cob, has yielded 158 bushels per acre. In all, 33 Full Size Packets, by mail, postpaid for 50 cts; two collections for 90 cts; four for \$1.70. Illustrated Catalogue accompanies each order. Address FRANKLIN ELY, Doylestown, Pa.

GET YOUR SEEDS FOR NOTHING



Our Offer.

Send us FIFTY CENTS, for one year's subscription to "THE AMERICAN HOME," and Ten Cents additional (60 cts. in all), to cover cost of postage and packing on the seeds, and we will send you, postpaid, by return mail, your choice of either of the collections enumerated below.

The package of seeds duly received, and we believe it is the best premium we ever received for the money invested.

M. P. RICE, County Supt. Lewiston, Ills.
GALENA, ILLS., Dec. 6, 1890.
Eds. *American Home*: It gives me pleasure to say a good word for the seeds received from you last spring. They were both excellent in quality and liberal in quantity. I like the paper very much. PHOEBUS NORRIS.

ELGIN, ILLS., Nov. 20, 1890.
Home Pub. Co.: The seeds were very fine. The tomatoes grown from your seeds were as large and fine as any I ever saw. We thought the offer a splendid one, for the paper alone is worth the price of both. MRS. H. I. CRANSTON.

- COLLECTION A.**—Consisting of 24 full-sized packets of flower seeds, as follows:
1. Gorgeous new Shirley Poppies.
 2. Lovely Blue Torenia Four-nieri.
 3. Little Gem Sweet Alyssum.
 4. Asters, many varieties mixed.
 5. Balsams, superb Camellia-flowered.
 6. Chinese and Japanese Pinks, finest, mixed.
 7. Ipomoeas, new ex. fine, mixed.
 8. Fanny, good quality, mixed.
 9. Petunia Hybrida, superfine, mixed.
 10. Sweet Peas, all the new varieties, mixed.
 11. New Oriole Calendula.
 12. Six new Nasturtiums, mixed.
 13. New Royal Prize Fancies.
 14. Brilliant Salvia Splendens (Scarlet Sage).
 15. Verbena Hybrida, extra fine, mixed (Choice Self Prize).
 16. Phlox Drummondii Grandiflora.
 17. Giant Mammoth Zinnias.
 18. The Giant Spider Plant.
 19. Aquilegias, choice double, mixed.
 20. Canterbury Bells, single, mixed.

21. Carnations, choice double, mixed.
 22. Hollyhocks, double fine, mixed.
 23. Perennial Peas, mixed.
 24. Sweet William, perfection, single, mixed.
- COLLECTION B.**—Embracing 30 generous packets of choicest vegetable seeds, making a complete kitchen garden for a small family, as follows:
1. The Matchless Tomato.
 2. Edmand's Early Turnip Beet.
 3. Jersey Wakefield Cabbage.
 4. Tomahawk Lettuce.
 5. Nichol's Medium Green Cucumber.
 6. Yellow Globe Danvers Onion.
 7. Japan Coral Flesh Muskmelon.
 8. St. Vallery or New Intermediate Carrot.
 9. New Red Etna Pepper.
 10. Early Oval Dark Red Radish.
 11. Hollow Crown Farnip.
 12. Long White Salsify or Oyster Plant.
 13. Pike's Peak Squash.
 14. Red Top White Globe Turnip.
 15. Our Quality Pea.
 16. Winter Cherry or Yellow Hnsk Tomato.
 17. New Proflig Ger. Wax Bean.

18. Stowell's Evergreen Sweet Corn.
 19. Golden Self-Blanch'g Celery.
 20. Pride of Georgia Watermelon.
 21. Red Wethersfield Onion.
 22. Neapolitan Margiajola On'n.
 23. Banana Pumpkin.
 24. Louisville Drumhead Cabbage.
 25. California Cream Butter Lettuce.
 26. Golden Glohe Radish.
 27. Large White Glohe Radish.
 28. Extra Curled Dwarf Parsley.
 29. Vandergaw Cabbage.
 30. Sweet Marjoram.
- COLLECTION C.**—Consists of packets 1-12 of Coll. A, and packets 1-15 of Coll. B, making 27 packets in all.
- COLLECTION D.**—Consists of packets 1-12 of Coll. A, and packets 16-30 of Coll. B, making 27 packets in all.
- COLLECTION E.**—Consists of packets 13-24 of Coll. A, and packets 1-15 of Coll. B, making 27 packets in all.
- COLLECTION F.**—Consists of packets 13-24 of Coll. A, and packets 16-30 of Coll. B, making 27 packets in all.

These Seeds are the very best obtainable, and very many of the varieties are novelties introduced for the first time this season. If purchased in separate packets you could not get them for less than \$2.25, and as a collection, any seedsman would consider them more than value for \$1; but we give either collection on terms named above.

POINTERS.

Regular Size Packets.
Choicest Quality Seed.
Many New Varieties.
Satisfaction guaranteed.
A whole collection given.
Each kind in separate Package.
Each collection put up in a neat box, with full cultural directions.

6 Collections of Seeds and 6 Subscriptions for \$3.10

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— Duck.

Borrowit—"But how are you to know that it is the inevitable until your kick is made?"

FREE **THE AMERICAN MUSICAL BOX** **LENETH'S IN.** **FREE**

WGT. 30 LBS.

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HANDY HORSE BOOK. Premium No. 820.



A complete manual for horsemen, embracing How to Breed, Buy, Train, Use, Feed, Drive, and How to Ride a Horse. It also gives the symptoms, causes and cures of all known horse diseases. It is invaluable when horses are attacked with diseases requiring prompt attention, and in districts remote from veterinary surgeons, because it enables any one to doctor their own horse. It contains a large number of illustrations. No one who owns or uses a horse should fail to have a copy of this book. The veterinary department was edited by Dr. A. T. Wilson, who was in active practice for fifty years. More than 250 topics are indexed, among them are Plans for Stables, Care and Management of Colts, Breeding, Control of Sex, Age as shown by Body and Teeth, Appetite, Bots, Colic, Cough, Cramps, Cribbing, Curb, Distemper, Blindness, Food and Drink, Hoofs, Lameness, Rheumatism, Rupture, Worms, Sprain, Ringbone, Spavin, and over 200 other subjects of great value to all owners of horses.

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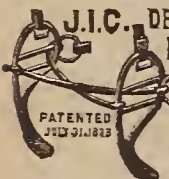
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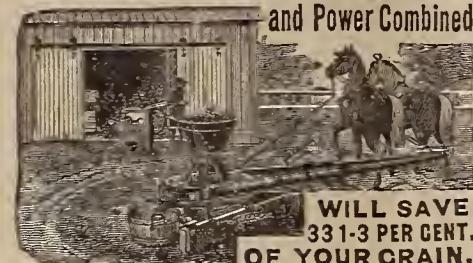
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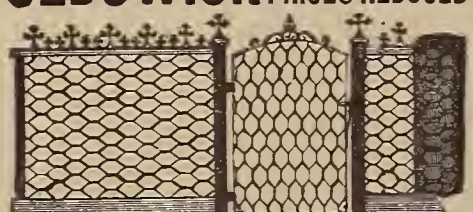
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FARM & FIRESIDE



4 EXTRA PAGES THIS ISSUE. EASTERN EDITION. VOL. XIV. NO. 10. PHILADELPHIA, PA., and SPRINGFIELD, OHIO, FEBRUARY 15, 1891. TERMS 50 CENTS A YEAR. 24 NUMBERS.

The Circulation of FARM AND FIRESIDE this issue is
250,700 COPIES.
 The Average Circulation for the 24 issues of the last 12 months, has been
250,708 COPIES EACH ISSUE.
 To accommodate advertisers, two editions are printed. The Eastern edition being 100,200 copies, the Western edition being 150,500 copies this issue.
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Current Comment.

THE following is an extract from the speech of the late Secretary of the Treasury, William Windom, delivered the night of his death. To those interested in the money question, we commend the study of his broad, liberal and sound policy:

The ideal financial system would be one that should furnish just enough of absolutely sound currency to meet the legitimate wants of trade, and no more; and that should have elasticity of volume to adjust itself to the varying necessities of the people. Could such a circulating medium be secured, the gravest commercial disasters which threaten our future might be avoided. These disasters have always come when unusual activity in business has caused an abnormal demand for money, as in the autumn, for the movement of our immense crops. There will always be great danger at those times under any cast-iron system of currency, such as we now have. Had it not been for the peculiar conditions which enabled the United States to disburse over \$75,000,000 in about two and a half months last autumn, I am firmly convinced that the stringency, in August and September, would have resulted in widespread financial ruin.

I am thoroughly convinced that a better method can be devised, which will, in a large degree, place the power of expansion and contraction in the hands of the people themselves. The opportunity for securing such a currency may be found in our bonded debt, which should, in my judgment, be in part exchanged for interconvertible bonds, bearing a low rate of interest, and always interchangeable for money at the will of the holder.

The quality of the circulation is even more important than the quantity.

Believing that there is not enough of either gold or silver in the world to meet the necessities of business, I am an earnest bi-metalist, and concede to no one a stronger desire than I feel for the free and unlimited coinage of silver, as soon as conditions can be reached through international agreements or otherwise, by which such coinage shall be safe. But it is my firm conviction that for this country to enter upon that experiment now would be extremely disastrous, and that it would result, not in bi-metalism, but in silver mono-metalism. I believe it would produce a swift and severe contraction and eventually reduce the market value of silver. When the silver dollar ceases to have more value than the bullion it contains, there will be little inducement to coin our own silver, and the cost of transportation will prevent its coming from abroad. How, then, will unlimited coinage either expand the circulation or enhance the value of silver?

The advocates of present free coinage insist that it shall not wait the slow process of mint operations, but that the printing-press shall be set to work providing certificates, to be issued for silver bullion, at \$1 for three hundred and seventy-one and a quarter grains.

When this consummation shall be reached, assuredly it will be if unlimited coinage be adopted under existing conditions, the too ardent and impetuous lovers of silver will sadly realize the truth uttered by the wise King of Israel: "He that loveth silver shall not be satisfied with silver."

IN the issue of FARM AND FIRESIDE for January 1, was published the Ocala platform of the National Farmers' Alliance and Industrial Union, frequently called the Southern Alliance. There is another organization of similar name with a large membership in the North and West. This is the National Farmers' Alliance, and it held its eleventh annual convention last month at Omaha, Nebraska. The following resolutions were adopted:

"Whereas, Owing to the oppression that has been put upon us by grasping monopolists, capitalists, trusts and combines, we believe it is time for action; and

"Whereas, The National Farmers' Alliance, in convention assembled, does most emphatically declare against the present system of government as manipulated by the congress of the United States and the members of the legislatures of the several states; therefore, we declare in favor of holding a convention on February 22, 1892, to fix a date and place for the holding of a convention to nominate candidates for the office of president and vice president of the United States. We declare that, in the convention to be held on February 22, 1892, representation shall be one delegate from each state in the union.

"Resolved, That we favor the abolition of national banks, and that the surplus funds be loaned to individuals upon land security at a low rate of interest.

"Resolved, That we are unalterably in favor of the Australian ballot law.

"Resolved, That we demand the foreclosure of mortgages that the government holds on railroads.

Resolved, That we discountenance gambling in stocks and shares.

"Resolved, That this is an administration of the people, and in view of that fact the president and vice president of the United States should be elected by popular vote, instead of by an electoral college.

"Resolved, That as the farmers of the United States largely outnumber any other class of citizens, they demand the passage of laws of reform not as party measures, but for the good of the government.

"Resolved, That the Alliance shall take no part as partisans in a political struggle, as affiliating with Republicans or Democrats.

"Resolved, That the National Farmers' Alliance demands that the inter-state commerce law be so amended and enforced as to allow all railroads a reasonable income on the money invested, and we demand that the mortgages on the Union and Central Pacific railroads be foreclosed at once, and the roads be taken charge of by the government and run in the interest of the people, with a view to extending both of these lines to the eastern seaboard.

"Resolved, That we favor the free and unlimited coinage of silver, and that the volume of the currency be increased to \$50 per capita. We further demand that all paper money be placed on an equality with gold.

"Resolved, That we, as land-owners, pledge ourselves to demand that the government allow us to borrow money from the United States at the same rate of interest as do the banks.

"Resolved, That all mortgages, bonds and shares of stock should be assessed at their fair value.

"Resolved, That senators of the United States shall be elected by vote of the people.

"Resolved, That laws regarding the liquor traffic should be so amended as to prevent endangering the morals of our children and destroying the usefulness of citizens.

"Resolved, That we favor the passage of the Conger land bill.

"Resolved, That we believe women have the same rights as their husbands to hold property, and we are in sympathy with any law that will give our wives, sisters and daughters full representation at the polls.

"Resolved, That our children should be educated for honest labor, and that agricultural colleges should be established in every state.

"Resolved, That we favor a liberal system for pensioning all survivors of the late war."

In some particulars the two platforms are alike, in others very different. Although the National Farmers' Alliance demands the abolition of national banks,

the inflation of the currency and government loans on land security, it does not indorse the sub-treasury scheme, the first and main object of the Southern Alliance.

The Omaha platform takes advanced grounds in politics. Although one of the fundamental principles of the organization proscribes partisan methods, it boldly declares against both old parties and in favor of putting a presidential ticket in the field in 1892.

We hope these two organizations, together with all other agricultural organizations, will unite on a sound platform. Strike out the impracticable planks, knock out the impracticable demagogues, unite on one strong, sensible platform, and the farmers can easily make a clean sweep of the political field.

THE following article on the removal of the Ohio Experiment Station, sent to us by the director, fully explains itself:

"The Ohio Experiment Station has hitherto occupied a portion of the farm belonging to the Ohio State University. This farm lies within the corporate limits of the city of Columbus, and the growth of the city around it during recent years has made it apparent that the farm cannot much longer be used for agricultural purposes. The streets bounding the farm on the north and south have been paved with asphalt during the past summer; the opening of the Neil avenue, a street running north and south through the entire length of the farm, has been decided upon; a great intercepting sewer has been constructed through the farm and more are to follow.

"Recognizing that these encroachments of the city must result in the removal of the station to cheaper and more suitable lands within a few years, the Board of Control, after consultation with the trustees of the university, has unanimously decided that measures looking toward such removal should now be instituted.

"A bill has therefore been introduced in the legislature by Mr. Cromley, chairman of the committee on agriculture of the House of Representatives, authorizing the commissioners of any county in the state to propose a tax for the purpose of securing the location of the experiment station within the county. The bill provides that the tax shall not exceed one mill on the dollar in any one year, and that it shall be divided into ten annual installments; but no tax shall be levied for this purpose unless such tax be approved by a majority of the votes cast at a special election to be held for the purpose of voting upon this question. It is believed that the experiment station may not only be of incalculable service to the farmers of the county in which it is located, by demonstrating what may be done on their own soils, but that it may render a much greater service to the agriculture of the state at large by being located upon soils more largely representative of the average soils of the state than are those of the farm upon which it is now established."

A SUBSCRIBER writes: "You quote the *Farmers' Call* as saying the large majority of manufacturers of agricultural machinery could sell to the foreign trade for twenty per cent less than to the home trade, and yet the foreign trade would net them as much. Now, you and the *Farmers' Call* either know that is not so, or you do not know what you are writing about. I know something of the way farm machinery is sold in the West. The manufacturers sell machines at an enormous profit and take pay in notes drawing 10 to 12 per cent interest, and secured so that payment is as sure as taxes or death. And cases of their losing anything are as rare as their charity towards any poor unfortunate who, through sickness or loss of crops, is unable to meet his payments. Now, as the above is the fact, how is the foreign trade at 20 per cent discount, as profitable as the home trade?"

In the first place, the above is not the fact. Farm implements are commonly

sold to the home trade on credit, on four, six, twelve or more month's time, with interest after maturity. Our correspondent incorrectly assumes that all these notes are paid. That is very far from the fact. We have in mind a prosperous firm that makes agricultural implements. That firm now has on hand over six hundred thousand dollars of worthless farmers' paper. How was it possible for that firm to prosper instead of being swamped? Who paid for the machines bought with these worthless notes? The farmers who paid for the machines they bought, paid for the others also. The manufacturers made the selling price of the machine high enough to cover losses from bad debts. If they could get spot cash from the home trade as from the foreign, with no bad debts, no costs of collection, no capital locked up in implements sold on time, no notes to carry, and with none of the other evils of the credit system, there is no doubt that a majority of manufacturers could profitably sell their machines twenty per cent cheaper than they do. Our correspondent falsely assumed that the article from which he quoted was written in defense of the manufacturers. Not so, but in the interests of the honest purchasers who, in paying for their machines under the credit system, paid all the profits of the manufacturers, and paid their unfortunate or dishonest neighbors' debts besides.

ONE of the most important meetings ever held by Ohio farmers was the third annual convention of the State Alliance at Galion last month. The convention was under the control of sensible, level-headed men, and the platform, taken all in all, is the soundest yet put forth by the Farmers' Alliance. The convention rejected a resolution offered in favor of the government issuing legal tender notes on real estate.

The silver plank adopted differs from the usual one in Alliance platforms. It demands "the free and unlimited coinage of silver, with the understanding that the government purchase all the silver bullion produced in the United States, which is offered at market rates. But, in case the government coins the bullion, it shall be entitled to the difference between the metal value of the silver dollar and its coin value." That will not suit the silver mine owners and silver speculators.

One plank demands that freight rates be reduced in proportion to the reduced value of farms and farm products, and that passenger rates be fixed at two cents per mile. In response to this demand, two bills have already been introduced into the Ohio legislature. We believe that the railroads would gain in the end by fixing passenger rates to all at two cents per mile. Those who do the most traveling now use thousand-mile tickets at that rate, and a reduction would be followed by a large increase of local passenger traffic.

In case the state and national legislators do not heed its just demands, the Ohio State Alliance resolves to co-operate with other reform organizations in the formation of a people's party, to enforce their just demands with the ballot.

Some cranks, extremists and political demagogues were at the convention and persistently endeavored to run things their own way, but signally failed, to the credit of the good, hard sense of the majority of the delegates.

FARM AND FIRESIDE.

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Our Farm.

COMMENTS ON CURRENT AGRICULTURAL
LITERATURE.

BY JOSEPH (T. GREINER).

SWEET POTATO DISEASES.—My personal experience in sweet potato culture has not been enough to make me an expert. While in New Jersey I have grown them every year on the limited scale of the home garden, and this quite successfully. Repeated trials in western New York, however, never turned out to be satisfactory, and I have given up the idea of growing what I can buy much better and cheaper. In no case have I noticed any form of malignant disease in my patch, only now and then a rotten specimen in storage. Many patches of commercial growers, however, are suffering more or less from rots and blights; and for this reason, Prof. Byron D. Halsted's illustrated treatise on "Fungus diseases of the sweet potato" (Bulletin 76, of the New Jersey Agricultural College Experiment Station, Brunswick, N. J.,) will be welcomed by a large number of growers. The only sad thing about it is that at this stage of the investigation only few and incomplete suggestions can be made in regard to treatment, either preventive or remedial.

The soft rot, a true mould, well known to every sweet potato grower (to his sorrow), usually appears most destructive in the store-room, rendering the attacked roots quickly soft and worthless. The tough and unbroken rind in a measure discourages the entrance of the rot fungus, and the latter gains access through the upper end of the potato and through cuts, wounds and breaks of the skin elsewhere. The disease is readily communicated from one potato to another one near it. It always comes from without the plant; and this suggests the importance of being careful in the harvesting and subsequent handling. The less the skin is broken, the less danger there will be from this soft rot. A moist atmosphere also favors its development. Therefore, it is advisable to store in a well-ventilated, artificially warmed room, that maintains a constant temperature of not far from seventy degrees, or about that of a living-room. Growers of sweet potatoes who keep their crop for the late market, or hold the roots until spring, are pretty much agreed that to avoid the soft rot, a stove or furnace is an essential part of the furniture of the storage cellar.

The black rot, also well known to all sweet potato growers, and perhaps the most destructive of all these diseases of the crop, is fortunately dry and inoffensive. It usually shows itself in the roots at digging time; but many of them are so

little affected that they find their way into the market, and any loss from the increase of the decay falls upon the middlemen and consumers. Unfortunately, no remedies have yet been found, or can even be suggested.

The soil rot, the real nature of which is not yet definitely known, enters the potato through the tender substance of the fine roots. Sometimes it is very destructive. No remedies can yet be suggested, but the adoption of a long rotation, so that sweet potatoes come as a crop many years apart, is probably the most practical method of getting the field clear of the destructive soil rot.

In the so-called stem rot the vine dies at or near the surface of the ground, and from there the decay extends down to and for a short distance into the potatoes, also in the opposite direction along the vine to the end, or at least to a point where the vine has taken root. The line between the decayed and healthy portion of the root is sharply drawn. The germs are in the soil, and inoculation is direct. As with the soil rot, the selection of manure may have some influence; but the same precautions (adoption of long rotation) as with the soil rot, will most likely give satisfactory and the most certain results.

White rot and dry rot have not yet become common or troublesome, and no remedies are as yet known. Scurf discolors the surface of the roots, and while reducing the market value of the potato, does not cause the destruction of the root, and therefore is no occasion for alarm.

Leaf blight and white mould attack the leaves, but are comparatively harmless enemies. If it becomes necessary, they might be fought by spraying with copper solutions.

BEST BREED OF COWS.—The results of experiments made with different breeds of dairy cows at the New Jersey Experiment Station (reported in Bulletin 77), are interesting and instructive. Representative animals of the following breeds: Ayrshire, Guernsey, Holstein-Friesian, Jersey and Shorthorn, carefully selected by their advocates, were used in these experiments, which, it seems to me, might have been still more valuable had the ordinary run of farm cows found representation. It is also to be regretted that the experiment was suddenly interrupted by the burning of the entire herd in the barns of the Agricultural College on the evening of November 2, 1890.

The average seller of milk is mostly interested to know what breed will produce the most milk, and this at the lowest cost for food. The Ayrshire cows produced a daily average each of 9 quarts, at an average cost of food per quart of 1.66 cents; the Guernsey cows 8.7 quarts, at a cost of 1.71 cents; the Holstein-Friesians 11 quarts, at 1.75 cents; the Jerseys 8.4 quarts, at 1.91 cents; the Shorthorns 9 quarts, at 1.71 cents. In the case of the Holsteins, the cost of the food was considerably increased by the fact that the amount of coarse fodder eaten by them was greater than in the other breeds and consisted largely of timothy hay, one of the most expensive foods eaten, which probably did not materially aid in milk production. The conclusion we must arrive at, from these figures, is that the Holsteins yield the greatest quantity of milk, and should be selected where that is the sole object. The Jerseys give the smallest quantity, and this at the greatest cost per quart.

The greatest average daily amount of solids in the milk also had to be credited to the Holsteins (2.95 pounds against 2.68 pounds to the Jerseys), but at a slightly greater average cost of food per pound (6.2 cents against 6.0 cents). At the same time, it must be said that the Holsteins give the lowest average per cent of solids in the milk, and only the much larger quantity of the milk produced overbalances this. In other words, the Holsteins give the greatest quantity of milk, but also the poorest in quality.

When it comes to the average daily amount of fat (butter), the tables are turned. The Guernseys produced an average daily amount each of 0.97 pounds, at an average cost of food per pound of butter of 15.3 cents; the Jerseys of 0.90 pounds, at an average of 17.9 cents; the Holstein-Friesians of 0.86 pounds, at 22.4 cents; the Shorthorns of 0.74 pounds, at 20.8 cents, and the Ayrshires of 0.73

pounds, at 20.6 cents. The cost per pound of butter fat, as a rule, is therefore greatest in the breeds whose average daily yield of milk is the largest. The farmer who keeps cows for cream or butter will find Guernseys most profitable, and Jerseys next. He does not want the Holsteins, even with their immense quantities of milk. For a family cow, we want the Guernsey, Jersey being second choice.

CROP FEEDING.—Many of our leading fertilizer manufacturers, among them the Mapes Formula and Peruvian Guano Co., Bowker Fertilizer Manufacturing Co., Williams & Clark's Co., etc., have embodied quite valuable information on agricultural topics in their annual catalogues. Indeed, it seems many of these firms are running a race to see who can bring out the most valuable and interesting matter. All this is done, of course, to attract the attention of farmers, and to gain their patronage. This is legitimate on their part; and on the other hand, every progressive farmer, especially if a consumer of concentrated fertilizers, should take advantage of so good an opportunity to get valuable information that costs nothing to him but a postage stamp or postal card for the application.

A Baltimore firm (W. S. Powell & Co.) has just sent me a copy of their *A B C of Agriculture*. This is an especially meritorious work of this kind, treating on a great variety of subjects which the farmer and gardener should know. In a general way, I would say that we hardly appreciate the catalogues of our manufacturers, seedsmen and supply dealers, as educational agents, so much as they deserve. A good supply of such catalogues is a library in itself, and ordinarily quite a reliable source of information, if we make due allowance for some exaggeration that may be found here and there in the description of the article offered for sale.

ERADICATION OF THISTLES.—The Illinois Agricultural Experiment Station (Champaign), in Bulletin 12, treating on field experiments with oats, suggests a line of treatment for killing Canadian thistles, which will be especially interesting to many eastern farmers. It is as follows:

"Cut the thistles when in full bloom (July), as close to the ground as possible. Plow about three inches deep and sow millet or Hungarian grass, seeding heavily; harrow. This may follow the preceding at once or after some two weeks' delay. In September plow under the crop, or save it for hay, as desired. At all events, plow and seed liberally with rye. Plow under the rye in May and seed again with millet or Hungarian grass; or plant to some hoed crop (corn), and give the most thorough cultivation, with continued searching for and destruction of every remaining thistle. Continue the clean cultivation and sharp lookout for thistles another year."

From my own experience with the thistle nuisance, I should expect the treatment to be effective.

FURTHER NOTES ABOUT ORNAMENTAL
PLANTING.

In the issue of Nov. 15, 1890, my esteemed friend, Mr. Pierce, kindly reviews my suggestions for planting a city lot, in issue of Oct. 15, and points out therein some very "prominent errors."

In the first place, as stated at the outset, my recommendations were made in as general terms as possible in order that a wide application might be made, with whatever variations individual cases might require. In ridiculing the planting of five apple trees and inviting attention to some large trees in Ohio, Mr. P. seems to have overlooked the fact that I decidedly advised using the dwarf apple and other trees, which in many years would not cover the space given them.

In the matter of walks, our critic cannot see the object in having them vary in outline nor the utility of having them occupy so much space, doubtless because of being familiar with the foot-wide walks in country villages and on many farms where the users walk single file. In a city, the walks are something which people insist on having roomy enough for several persons to walk side by side and not drag their dresses in the grass or in the snow. Again, where one likes walks of a uniform width from the street to the door, they are welcome to them, but that is no reason why all must be so arranged. As to dimensions for gates, steps, etc., Mr. P. does his own estimating, as I made no reference to them, as not being germane to

the subject; but he is assured that to see them of the widths he mentions is not at all uncommon to city people. This matter of estimating is also true as to the size of the house, the width of the lawn, etc. I did not deem it necessary to go into detail, else I would have said that the house, as plainly shown in the illustration, uses but little more than half of the width of the lot instead of his figure of twenty feet.

As to the placing of the rear walk, this is simply a matter of opinion; the probability is that if it followed close to the house in straight lines, those who use it the most, butcher boys, grocers and others who deliver articles, would cut across the corners, leaving bare paths in the lawn, which would be far more objectionable than having some grass on each side, wherein several trees might be accommodated, more for the purpose of breaking up the monotony of the bare walks than anything else.

Magnolia speciosa was not said to be the most desirable or the best, and instead of being hard to get it can be obtained from any well-stocked nursery, cheaper than almost any other sort. The main reason for my recommendation was that it blooms some later than other kinds, hence it is not so liable to be injured by late spring frosts, which are troublesome in many sections where readers of this paper reside. It is true that under the most favorable conditions it may reach the size mentioned by Mr. P., but Ellwanger & Barry say that the average size of this (one of the smallest magnolias) is from nine to fifteen feet.

Simply because in bed four, which lies next to the line of the adjoining lot, I mentioned that Norway spruce pines, firs, etc., might be useful at the rear as a screen for the back yard during the winter, Mr. P. emphatically condemns the whole arrangement because it is beyond his ken. This probably arises from the fact that he knows no other way than to plant this bed (which is, at its widest part, seven feet across and about thirty feet long) as full as possible of the large growing evergreens and sticking small hardy plants between them.

This is not the modern method of planting such beds or borders. Of the four evergreens mentioned, perhaps only one of each, by any good planter, would be used, while a dozen or more of the dwarf forms would be planted, many of these not requiring any more if as much room as a thrifty rose bush; and among these it is no difficult matter for the herbaceous plants referred to to thrive. Mr. P. may urge that no mention of these dwarf kinds was made in the article; and this is true, simply because in such limits proper attention could not be given each detail and no claim was made for its being done.

With regard to the other beds, he falls into the error of supposing that everything mentioned must be used, when my intention was to give a list, by no means complete, from which suitable subjects might be selected. Again it is evident from the measurements given, that Mr. P. would advise that large growing conifers should be allowed to grow naturally, even in a city lot where at best nearly everything must be artificial. I do not agree with this because, however desirable it is to have naturally grown trees where the grounds are of ample size, yet in a small place this cannot be done; they must be kept down to a moderate size by means of pruning.

Mr. P. says, in effect, do not have any evergreens. This dictum is all right, but most people want them and I believe them desirable, even in small places, because of their cheerful winter appearance and general contrast; and in planting them we have to do the best possible under the circumstances. Than the inexpensive spruces, pines, firs, hemlocks, etc., no trees can be finer, when kept in pyramidal shape, well clothed with branches down to the ground and of a small size by the use of the shears.

The question of protection in my article was not referred to, but our able reviewer seems to discover that that was the sole purpose of my use of evergreens, judging by the space he devotes to the matter. About the finest of our ornamental trees, the cut-leaf birch, Mr. P. urges its size as an all-sufficient objection. Because it, in turn, does make a large tree, it is

the only tree of any considerable size that was to be planted in my plan and would have space for development.

Of the hundreds of these trees which I have observed in the city of Buffalo and elsewhere, in small lots as well as in large places, I have yet to see one which has seemed out of place or too large for its situation; and I do not believe that it would be too large for the position recommended.

Our discerning friend also discovers that I believe the true place for a bed of coleus to be in the midst of gravel walks, whereas, in fact, the use of this foliage plant is only given as one of seven alternatives for use in that spot, the one which I chiefly urged being a vase of flowering plants. Mr. Pierce refers to the marvelous growths which certain shrubs on grounds near my home have made in two years, and this time he has the facts on his side. I also am aware of the strenuous effort put forth by the owner to attain just such results, as I superintended the whole matter, planting most of them myself, but I can further assure my friend P. that not on one place in a hundred will anything like that degree of growth be had, simply because the proper conditions are not supplied.

The statement by Mr. Pierce that "rhododendrons are especially suited for such places and thrive better than the conifers," I consider decidedly misleading as regards our climate north of Washington, for it is a fact that cannot be controverted, that more money has been wasted by people generally on these plants, with the least satisfactory results, than is the case of any other one plant. In the first place, the most of those hitherto sold have been too tender to withstand our winters, particularly away from the seashore. Even now the sorts that are advertised as being entirely hardy, are not so unless one has excellent facilities for caring for them, or they are planted in a particularly favored situation.

It is true that about Boston there are some magnificent plantations, but they are near the sea, have favored situations and many men are employed to see that they are prepared for the winter in the most thorough manner. Again, although while in bloom they are showy, yet the hardiest have a very limited range of dull colors, and in attractiveness do not begin to equal many flowering shrubs which are not nearly so expensive, and in winter beauty, cannot approach the evergreens.

ELMER E. SUMMEY.

SOME QUERIES ON FERTILIZERS.

BY JOSEPH.

BONE PHOSPHATE.—Several subscribers want to know what is meant by "bone phosphate." One fertilizer man, for instance, gives the analysis of dissolved South Carolina rock or acid phosphate thus: "Phosphoric acid 13 to 15 per cent, equal to bone phosphate 30 to 34 per cent," thereby creating the impression in the minds of some that there is a greater fertilizing value in this phosphate than in one having simply 13 to 15 per cent soluble phosphoric acid. Bone phosphate is only another term for "phosphate of lime" as found in bones. The dried bones of animals contain about 57 per cent of this phosphate of lime, of which a little less than one half is phosphoric acid. There is no need of taking any note of this "equal to bone phosphate." All we want to know is the percentage of soluble phosphoric acid; and this is valued at 8 cents a pound, whether derived from bone or rock.

SULPHATE OF POTASH.—I have also several inquiries about the meaning of "equal to sulphate of potash." In one analysis we find this: "Potash 6 to 8 per cent, equal to sulphate of potash 12 to 15 per cent." What we understand under the term "potash," is simply potassium oxide, a compound of two atoms of potassium and one of oxygen. This substance combined with sulphuric acid, gives us the "sulphate of potash." Our measure of value is potash or potassium oxide; but as we rate this differently, according to the different combinations in which it appears, the additional information "as sulphate" or equal to sulphate of potash, so many per cent, will give us a clue to its proper rating. In our schedule of valuations, potash as muriate, or in kainit is quoted at only 4½ cents a pound, while in sulphate it is worth 6 cents per pound. There is, however, no earthly use of giving the percent-

age of sulphate of potash. This can only serve to make the matter more complicated and the information misleading. Our fertilizer men should simply put it "potash (as sulphate) 6 to 8 per cent." Then we know we have in a ton of such fertilizer from 120 to 160 pounds of potash at 6 cents per pound, or from \$7.20 to \$9.60 worth in each ton.

HAVING ANALYSES MADE.—Will the Department of Agriculture analyze samples of fertilizers when requested? I think not. But many of the state experiment stations do. In Bulletin 25 (new series) of the New York Agricultural Experiment Station, Geneva, N. Y., appears the following paragraph:

"The stations will continue, as in the past, to make analyses of commercial fertilizers for farmers, without charge, on the following conditions: (1) That the samples are taken by consumers from stock of present season, and in accordance with the station instructions for sampling. (2) That the samples are fully described on the station Form of Descriptions of Sample or otherwise, as may be required. (3) That the station is free to publish the result, if it sees fit. Instructions and forms for taking samples will be sent on application."

The stations were created for the very purpose of aiding agriculture, and they are supported by the people's money. If people think it would be in their interest to have an official analysis made of any fertilizer on the market in their vicinity, and when such analysis has not already been made by the station of their own state, they should by all means tell the station frankly of their wants. A request of this kind would in all probability find due consideration. I further believe that it would be better both for the farmer and the stations, if there were a little free inter-relation between both. The farmer, by appealing to the station in many of his troubles, might often find most welcome assistance; while the station at the same time receives suggestions just as welcome, about the ways it can be of use to the farmer.

FERTILIZER FOR POTATOES.—What percentage of the three chief plant foods a fertilizer for potatoes on a poor clay soil should contain, is more than I or anybody else can tell, unless we know something more about that soil. If it is deficient in all the chief elements, we must apply a complete fertilizer; and in such case I would use one having 3 to 4 per cent nitrogen, 6 to 8 per cent phosphoric acid and 8 to 10 per cent potash. If one or the other of these plant foods is yet in fair supply in the soil, as may be told from previous tests, or perhaps by other indications, this particular one need not be present in the fertilizer. The complete fertilizer (analyzing as mentioned) will be the safest, although it may not be the cheapest. Good composted stable manure will also be found to have about the right proportions for a "fertilizer for potatoes on poor clay soil."

OAK BARK ASHES.—I have no knowledge of an analysis made of fresh, oak-bark ashes; but as the bark of trees is usually richer in potash than the body-wood, and our hard oak ashes contain a high percentage of potash in themselves (often over 9 per cent), we will not be far out the way if we concede to it 9 to 10 per cent potash, with perhaps 1½ per cent of phosphoric acid. I think we could afford to pay \$12 or \$14 for such ashes. On the other hand, ashes of spent tan bark have only a small per cent of potash and phosphoric acid and are variable besides. A ton should not cost us over \$3 or \$4 at the most.

CULTIVATION OF THE HARDY HIBISCUS.

Some time ago I noticed this inquiry: "Why did my hardy hibiscus fail to flower?" There were many buds, but when nearly ready to open they all blackened and dropped off."

Last spring, in putting out roots that had been separated, the ground was well crowded and it took some time to get such locations as I wished. There was a very nice root left and no place to put it. The rest had good, sunny locations, and as I did not wish to throw it away, I planted it on the north side of a large cherry tree, thinking perhaps it would make root if not flower. You recollect we had a very hot and dry summer, with a cool and showery fall. My hibiscus all budded full, with

now and then a straggling, dwarf flower, with the exception of the one in the shade of the cherry tree; it did seem as though the dear thing was on a strike on its own motion. I took the rule and measured many of the flowers that measured across their petals seven or eight inches, and the plant kept right on. The rain would come and spoil its beauty, slit and drabble its gay dress, but when the sun came out and the breeze shook off the moisture, then it would laugh and frolic with such glee as only flowers can; and when frost came it was still crowing in its gladness for the shade.

In cultivating the hardy hibiscus, some pinch off the stems when they are about two feet high; this gives them many laterals, but the flowers are correspondingly small. It is true you get more flowers, and perhaps cover more space with its beauty, but if you wish to see hibiscus in all its glory, let the stems grow—six feet if it wishes. Firmly stake it, so that the wind will not break it nor the rain beat it down. Mulch it with muck from the swamp; if its roots are set in the muck, so much the better. Give it shade, with a bucket of water now and then about its roots, and it will thank you with a thousand flowers. G. G. M.

Marcellus, Mich.

ORANGE GROWING.

"There is nothing so interesting to me as the planting of an orange tree. In planting the apple, pear, plum or peach, it is with the consciousness that in a few years there will be no trace of your labor. In planting an orange tree, you have the feeling that you are working for posterity."—Interview with B. H. Warder, after a visit to Florida.

The orange tree grower becomes an enthusiast. He watches the tree as he does a child. He will tell you the cause of its faulty growth and the remedy he applies. He consumes the midnight oil in studying the proper proportions of nitrogen, phosphoric acid, potash and lime necessary for growth of tree and quality of fruit, and whether best applied in stable manure, cotton-seed meal, raw bone, Florida phosphate, Thomas slag, kainit, muriate or sulphate of potash, fish scrap, muck, Mapes, Bradley or other formula. He will point out to you the habits of the trees on which grow the Washington Naval, the Jaffa, the Mediterranean Sweet, the Maltese Blood, the Homasassa and scores of other varieties, and descant upon the qualities of different citrus fruits, as he did in New York upon the Early Harvest, Belleflower, Seek-no-further and other varieties of apples. He will tell you of the possibilities of the high pine land in the healthier and longer lived tree and in the healthier and longer lived culturist; and his greater freedom from malaria and the ever-industrious mosquito, contending that the ills he escapes, endured by his hummock neighbor, are more than an equivalent for the increased fertilization required. "Deliciously exhilarating," he will tell you, is the labor of tending a Florida wilderness into the prolific orange grove.

The above thoughts have been suggested by the transformation of a comparatively uninviting pine woods and oak scrub, forming the site of Interlachen (between lakes) in 1882, and its fourteen hundred acres of orange trees in 1890, a good many already in bearing, and that in a few years will produce many fold the annual income of the cereal products of the middle and western states; and if cared for will continue to do so down the ages. The first orange tree brought into Europe is still said to be bearing fruit, and the age of a single tree has been traced back seven hundred years. So that the planter of an orange grove may well feel that he is working for posterity.

G. W. HASTINGS.

THE COW AND THE BARB.

Animals learn easily or remember well, especially if in the learning they are frightened or injured.

A farmer's most valuable cow was a jumper. She led the herd, and often led it out of the pasture when the feed was short. The head-board and the hobble had been tried, but these interfered with her freedom and lessened her product.

At last the farmer decided to run a single barbed wire over the tops of fences, making them too high to be jumped. No

accident was likely to occur from a cow's attempt to jump the fence regardless of the wire, because every cow "explores" before she jumps.

While the farmer was stretching the wire, the jumper came along, and going up to a part completed, placed her head over it and began to rub the under side of her neck. At last she caught a barb that tore the flesh and drew blood. With a snort, she ran away a hundred yards, and then stood looking toward the place where she had felt the barb.

She did not jump out of the pasture again or attempt to. Whenever the cow "nosed around" preliminary to jumping, she found the wire or the barb, and withdrew at once, apparently remembering what she had suffered.

GEORGE APPLETON.

DILUTING FRESH MILK FOR CREAM RAISING.

Perhaps the most valuable lessons learned in the dairy world during 1890, were taught by the failure of the ice crop of last winter. Creameries and many large dairies had become so accustomed to a plentiful supply of ice that they had come to think they could not get along without it. But experiment and experience have discovered that by diluting fresh milk 25 per cent with either warm or cold water, the time of cream raising may be so much reduced as practically to do away with the necessity of using ice for creaming milk. The lesson is of great value and has already been the means of saving many dollars; and, rightly used, may be the means of saving more. We do not know of any carefully conducted experiments bearing upon the point, but from the few observations made ourselves, we are inclined to think that those who have made really good butter without the use of ice will find that it keeps sweet longer and stands up better when exposed to the air, than butter made with ice. When ice is abundant it is apt to be used too freely, and the milk, cream and butter be made too cold. Whether or not diluting the milk has any influence on the churnability of the cream, remains to be tested, so far as we know.—*The Jersey Bulletin*.

THE FOOT OF A HORSE.

The foot of a horse is one of the most ingenious and unexampled pieces of mechanism in animal structure. The hoof contains a series of vertical and thin laminae of horn, amounting to about five hundred, and forming a complete lining to it. In this are fitted as many laminae belonging to the coffin-bone, while both sets are elastic and adherent. The edge of a quire of paper, inserted leaf by leaf into another, will convey a sufficient idea of the arrangement. Thus, the weight of the animal is supported by as many elastic springs as there are laminae in all the feet, amounting to about four thousand, distributed in the most secure manner, since every spring is acted on in an oblique direction.—*Exchange*.

WINTER RATION FOR SHEEP.

Not only is it true that sheep kept confined in winter and fed to be fattened, relish a change of diet, but they also generally gain faster on a diversified ration. Thus, of linseed oil-cake meal alone it takes six pounds, according to the English experiments, to produce a gain of one pound of flesh, while of the meal and peas mixed it requires only four pounds. An excellent daily ration for a sheep of the mutton breeds was found to be one pound of clover hay, four ounces of linseed meal and nineteen and a half pounds of mangels.—*American Sheep-Breeder and Wool-Grower*.

Prepare for Spring

Now is the time to attend to your personal condition in preparation for the change to spring season. If you have not "wintered well," if you are tired out from overwork, if your blood has become impure from close confinement in badly ventilated offices or shops, you should take Hood's Sarsaparilla at once. It will purify and vitalize your blood, expel all germs of disease, create a good appetite, and give you whole system tone and strength.

"I was very much run down in health, had no strength and no inclination to do anything. I have been taking Hood's Sarsaparilla and that tired feeling has left me, my appetite has returned, I am like a new man."—CHAUNCEY LATHAM, North Columbus, Ohio.

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NOTES FROM MY HOME GARDEN.

BY JOSEPH.

EARLY POTATOES.—Now nearly a year ago, a friend in Minnesota sent me three specimens of a new seedling potato, under the claim that they were earlier than anything now grown. These tubers were the most beautiful I ever saw, so even, so perfect; colored a russet-white. I planted them with great expectations. The plants made an early and extremely vigorous growth, and produced a fine lot of potatoes.

While I by no means was ready to endorse the originator's claim of superiority in earliness to all others, I had received such a favorable impression that I spoke to a Philadelphia seedsmen (Wm. H. Maule) about it; and what should he do but look up the record of the new variety, buy the whole stock, call it the Freeman (after the originator), and offer it in his catalogue at \$3.00 a pound.

I have no objection to this, for my faith in the Freeman is very great; but the trouble is that my friend Maule tells of my experience with the potato in his catalogue, giving my full address; and now comes letter after letter, asking me whether I have any of the Freeman potatoes to sell, and at what price, and if I would not please reveal the address of Mr. Freeman in Minnesota. Some of these letters had stamps enclosed, others had not; and I am expected to reply to a lot of letters and spend time and pay for stationary and stamps, in a matter that really does not benefit me in any way. But then, I am a patient sort of a fellow; so I have made answer, in every instance, to the effect that I have no potatoes of the Freeman to sell, and that I am not at liberty to give Mr. Freeman's address. So far as I understand it, Mr. Freeman has no right to sell any potato of this variety except to the introducer, who owns or controls the entire stock.

It will do no hurt to call people's attention, occasionally, to the propriety of enclosing stamp for postage, if they expect an answer in their own interest. I think it would be still more just and to the point if another stamp were enclosed for stationary. All such things cost money, and we should not be expected to incur expense for the privilege of spending our time in replying to letters for somebody else's exclusive benefit. I will add that the readers of FARM AND FIRESIDE, when writing to us and expecting a personal reply by letter, have seldom been guilty of neglect in this respect. When reply is to be given through the columns of the paper, postage, of course, is not required.

The Freeman potato is the same one which our friend, Mr. T. B. Terry, of Summit county, Ohio, the great potato specialist, tells so much about in some of our agricultural papers. He is to plant a barrel, agreeing to sell the entire product for a stipulated sum per bushel. The seed is precious, and Mr. Terry wants to grow the largest possible number of bushels from the seed without, of course, resorting to unusual and expensive methods. How to preserve the seed in best condition is the problem. I do not know how Mr. Terry is going to manage, as I have not been a close reader of agricultural papers recently. It may be supposed that the potatoes will be shipped to him in a barrel and will be some time on the road. The first thing that I should do with them (and shall do with the barrel I am to plant myself), if they arrive weeks or months before planting time, would be to take them out of the barrel, put in regular potato crates or boxes, and store them in a cool potato cellar, as near as possible to the light (for our potato cellars are dark), and otherwise try to keep them sound and plump and dormant. At the approach of planting time, when the tubers show signs of growth, they may be taken out and spread *thinly* on the floor of a light room until wanted for planting. Of course, they must be cut to single eye very carefully, and planted in rich, well-prepared ground, in the usual way.

People who might wish to make *extra* efforts, could plant larger pieces (halves) in a hot-bed, and pull and plant the slips or sprouts somewhat like sweet potatoes. I prefer to plant pieces of the tuber, giving them a foot space in the rows and making the rows three feet apart.

This way is safe to adopt even for the main crop for market, but heavier seedling will be advisable. This single-eye planting, I confess, is not to my taste. Whole, medium-sized tubers usually give the most satisfactory returns; but seed is so scarce this year that we must be content with planting cut seed. To go to the extreme (single-eye), however, can be allowable only in extreme cases, like that of the "Freeman" potato.

The results of an experiment made by the *Rural New Yorker* last season may be interesting in this connection. "It appears, therefore," says the *Rural* in its summary, "that whole potatoes of medium size, placed one foot apart in trenches three feet apart, yielded over ninety-five bushels per acre more than single-eyed pieces placed three inches apart; seventy-three bushels more than single-eyed pieces placed six inches apart, and fifty-five bushels an acre more than either two-eyed pieces or half potatoes."

New potatoes will in every probability bring a good price next June and July, even if a pretty large area should be planted—what I slightly doubt, on account of the great scarcity and the high price of seed. In regard to the best variety for earliest crop in the market garden, I believe that we now have the choice between Early Ohio, Early Sunrise, Burpee's Extra Early and Ohio Jr. In some localities one may do better, in others, another. I am not prepared to say which is "best" among them. Probably Early Ohio is as early as anything we have that is worth having. Fortunately, these first early sorts seldom suffer seriously from blight and rot.

MUSHROOM GROWING.—I am often quite fortunate in anticipating wishes of my friends. I had only just sent off my communication on mushroom growing, for last issue of FARM AND FIRESIDE, when two requests for information on this subject were received. One of the inquirers had mushrooms growing spontaneously behind his barn, and he thinks that is a good chance to get mushroom spawn for transplanting. The effort, I think, will be abortive. The easiest way to get the spawn is to buy it from a reliable seedsmen.

LUCRETIA DEWBERRY.—I confess I am fond of the dewberry, and consider it far ahead of any cultivated blackberry I know of. While I care little about the latter, greatly preferring the fine, sweet blackberries of the wildwoods, I think neither of them is quite equal to a well-ripened dewberry in deliciousness and lusciousness. Still, the fruit does not succeed everywhere. The Lucretia appears to be worthless here, while we had it in perfection in New Jersey. Whether this is owing to soil or climate, I do not know. The dewberry is at home on New Jersey sand. Here we have strong, clay loam. The fruit of the Lucretia and the Bartells, another good variety, is early and large, and the bush productive. A good way to manage it is by training it around stakes.

LATH TRELLIS.—Some time ago I found in *Farmer's Review* the following description of a trellis recommended for Lima or other clinging beans:

"I take three laths and nail them together at the top, with one wire nail with flat head; do not drive quite in, then clinch. This allows for spreading when set to hills. The three laths should be driven to every two hills, or to each hill, as we may desire, if the crop is heavy, in the form of a tripod, and they will withstand more wind than a single pole, unless very large and stout. Two bundles of lath, costing twenty-five cents, will be sufficient for any ordinary family for home use, and twenty minutes' time will nail them together and sharpen the lower ends. They are just as effectual to train tomato vines as for bean-poles."

I have tried such lath tripods for Lima beans, tomatoes and gourds, but found them desirable for neither. I seldom care to use supports for my tomatoes, except, perhaps, for a few specimens, and then I train them to a single pole. For Limas I yet consider the wire trellis with posts four to five feet high, superior to anything I ever tried. Although we now have all sorts of bush Lima beans, and very good ones at that, I do not think we can yet dispense with the climbing Limas, and consequently with the trellis.

POTATOES FOR SIZE.—A subscriber in Dorchester county, Md., who signs him-

self "Potato-bug," competed, the past season, for a prize for largest tubers of People's potato. He prepared a spot only large enough for eight hills, by spading into the already rich soil the following ingredients: (1) One bucketful hen manure, clear droppings, (2) one bucketful well-rotted stable manure, (3) one bucketful of commercial fertilizer, (4) two gallons of corn meal, (5) two gallons of fresh wood ashes. The best of care and plenty of lukewarm water in dry weather was given, yet the yield was not larger than from plants having ordinary field culture. Now he wants me to tell him the reason of the failure. I would do so if I knew, but I do not know everything. A hog or a goose can be made excessively large and fat, by "stuffing" with rich food, yet the best-fed man may remain lank and lean all his lifetime. Coarse weeds will grow tall and rank on a manure pile, while a potato hill growing there may produce but a few or small tubers. Primitive soil fertility and natural conditions often give results unobtainable by artificial stuffing. I have never been able to grow prize crops by the excessive use of manures on a few hills. Is it because we drown the pig in the swill barrel? If I were to grow tubers for size, I would take the best natural potato soil to be had, manure well, but not excessively, trench deeply, and thin every hill to one good, strong stalk at an early stage.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

HOW TO PLANT TREES.

BY PROF. T. V. MUNSON.

With the numerous excellent books and papers in every branch of horticulture now to be had so cheaply, it seems almost needless to offer instruction on so simple a matter as planting a tree, yet so often is the question asked by customers, that I try to answer here for all who do not know. Make ground thoroughly mellow at least fifteen inches deep and three or four feet wide every way, if holes are to be dug; thorough plowing of entire plot is preferable if it can be done. Prune the tree close, straighten out roots evenly, having the tree standing the same depth it was in nursery; work fine, mellow soil—but no manure—all among the roots, and when they are all covered an inch or two, then press the soil very firmly down with the foot or a broad-ended maul, after which fill up evenly with loose soil, over which place a mulch of rotten straw or manure three or four inches deep, extending three feet every way from the tree. Whether the mulch is put on or not, keep the soil well cultivated about the tree. In this climate all fruit trees should be headed low and leaned a little to the south-west when planted.

POLLEN FOR CROSSING APPLES.

When the first blossoms of the variety we wish to use for fertilizing have expanded, we pluck out, with fore finger and thumb, the stamens and pistils and drop them into a cup. In an hour a smart boy can gather in this way enough of the anthers—in the "hard pellet" state—to fertilize a thousand or more blossoms. After gathering we dry it in the cup, in a warm, close room. In the process of drying the anthers ripen and burst, and when needed for use a camel's-hair pencil, moistened, will come out of the dish laden with the golden dust. To show the durability of pollen gathered in this rough way, I will state that three years ago we laid aside a cup of pollen not used for four weeks. At the end of that time Dr. Halsted germinated it on moistened slides quite as perfectly as that freshly gathered.—Prof. J. L. Budd.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

If Koch's consumption cure proves trustworthy we are inclined to give the McKinley bill credit for it. Having been charged with every ill, it is only fair to credit the account with a cure.—*Burlington Hawkeye*.

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HIGH BRED SWEET POTATOES. One barrel worth two of Northern seed. All that grow Irish Potatoes should have my catalogue free with testimonials. John W. Hall, Marion Sta., Md.

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To all who intend to plant Fruit and Ornamental Trees, Shrubs, Vines, Roses, etc., if you will give me your name and P. O. address on postal card directed to J. Hammond, Nurseryman, Geneva, N. Y. Mention this paper when you write.

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100 Varieties, Also Small Fruits, Trees, &c. Best rooted stock. Genuine, cheap. 2 sample vines mailed for 14c. Descriptive price list free. LEWIS ROESCH, Fredonia, N. Y. Mention this paper when you write.

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WE THINK NOT. Probably Black Rot or other grape diseases affect them. If so, you can prevent this trouble by using

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OUR CATALOGUE OF NORTHERN GROWN SEEDS FOR 1891. Contains over 650 illustrations and 2 colored plates. The only one published illustrating EVERYTHING IN SEEDS, BULBS AND PLANTS, TRUE TO NATURE. FREE on application. Low Freight Rates to the West. Northrup, Braslan & Goodwin Co. Seed Growers, MINNEAPOLIS, MINN.

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The above picture tells a plain story to the thousands of gratified users during the past ten years. To strangers we say that PEERLESS PAPER MEAT SACKS are guaranteed to prevent skippers in meat. They last from 3 to 5 years. Full directions on every sack. If your grocer does not keep them we will deliver a dollars worth or over free of freight or express charge to any point in the United States on receipt of price, 3.1 or 5c. according to size. Large or 3c. size takes 1 lb. hams and shoulders of hogs weighing live weight from 350 to 600 lbs., according to how the meat is trimmed; medium or 4c. size from 200 to 350 lbs., and the small or 3c. size from 100 to 250 lbs. PEERLESS PAPER MEAT SACKS are too heavy to mail and we will not prepay expressage on a less quantity than a dollars worth. Money must accompany all orders. Merchants everywhere ought to handle them. Address Grent Southern Co., Frederick City, Maryland.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

A VENTILATOR FOR POULTRY-HOUSE.

We give a plan of a ventilator (sectional view), intended for ventilating a poultry-house, and at the same time avoiding draughts or currents of air. It was sent by Mr. J. H. Clough, Tolland, Conn., who gave no detailed description of it other than is explained by the cut itself. The great difficulty in ventilation during the winter season is the admission of cold air and the loss of accumulated warmth. Any method that permits of a free circulation of air and which protects the fowls from draughts when the wind changes, will be of advantage.

MATING UP FOR BREEDING.

Men who make a business of breeding fancy poultry have their breeding-pens made up before this time. It is usually attended about the beginning of the year. This is done for the double purpose of securing purity of the stock and early hatches. Hens and pullets are apt to receive the attentions of the cock for some time before they begin to lay. That one may be sure of the parentage of the chicks on the sire's side, the birds must be mated early. Early mating and good treatment induces early laying and the opportunity for early chickens. Many an establishment has a considerable number of chickens running about now, and may have many more soon.

The large breeders are obliged to hatch thus early for themselves before the egg-shipping season begins, because then those who advertise freely, and are known, are pushed with orders, as it is warm enough to ship, and sometimes cannot fill their orders as fast as they come. But all who keep fowls and raise poultry for market or for eggs, should have the birds they do not wish as breeders all sold off, especially the male birds. A mongrel cockerel running with the hens now will be very apt to leave his impression on chicks hatched in March or April; therefore, he should be gotten out of the way. The same is true of pullets or hens. Select the breeders, and if the remainder are not wanted for some particular purpose, fatten and sell them immediately, unless they are laying.

The best birds should be selected to reproduce their kind next year. Careful and persistent selection, and the mating with a good male bird every year, will soon make an improvement in the appearance and profits of the poultry. It will pay any poultry-keeper to breed only from the best birds he has, and if his flock is not quite satisfactory in the matter of productiveness, he should get some new blood into them. If more eggs are wanted, put a Leghorn or Houdan cock with the breeding hens. Do not allow too many hens to one cock, and the chicks will be stronger. If you want a rooster from a breeder, order him soon, as the stock is being distributed rapidly and prices are going up every week. Decide what is wanted, then get it, and give the breeding stock the best chance possible in housing and feeding.

MATING FOWLS FOR BREEDING.

It is a fact, recognized and admitted by all poultry breeders, that in selecting fowls for breeding, it is desirable that the ages of the cock and hen should vary. It is generally admitted that the strongest and best chickens are produced from a young cockerel and two-year-old hens; but unfortunately, however, the chickens of such parentage have too frequently a large proportion of males, and therefore it is that some breeders prefer a two-year-old cock to put with pullets. This rule must not, however, be looked upon as imper-

ative as to either case; there are exceptions to both, and good chickens may also be produced from cocks and hens all of the same age. One thing ought always to be born in mind, that in mating young fowls less than a year old, their chickens will always be backward in fledging; neither is it desirable to breed from fowls after they have passed their third year. The male bird has the most influence upon the color of the progeny and upon what are usually known as the fancy points, while the form, size and useful qualities are principally derived from the hen.

As to the crossing of a breed, the cockerels in the progeny will more or less resemble the father, while the pullets follow the mother, and a knowledge of this fact is of much importance to those who wish to breed back to the original strain. In the larger breeds it is frequently desirable to increase the size or to render more prominent some portion of the body. In such cases a cross with a hen of foreign breed should be employed. If, on the contrary, it is the plumage which is sought to be modified, then it is the male bird that should be thrown in. The same rule should also be adopted in breeding the cross out again, or in retaining any new characteristic.

EXAMINING EGGS.

If you wish to preserve eggs, look at them through a strong light. See that they are perfectly clear, with not a dark spot through them. A good way to tell a fresh egg is by the air bubble on the large end. The smaller the air bubble the fresher the egg. A fresh egg must be examined to see the air bubble. Hold it up to an egg tester, turn it around slowly, and look close near the top of the large end. If the bubble looks large, say one quarter of an inch deep, it should not be used. Get a fresh egg, newly laid, and make yourself familiar with the position and size of the air bubble. You then can always tell a fresh egg, as the bubble becomes larger and larger every day. A fresh egg has a somewhat rough shell, while the shell of a stale egg is very smooth. When cooked, the contents of a fresh egg stick to the shell and must be removed with a spoon, but a stale egg, when boiled hard, permits the shell to be peeled off like the skin of an orange. It takes a longer time to boil a fresh egg than it does for a

stale egg, and fresh eggs are more easily beaten into a froth than stale ones. You cannot, however, distinguish a fertile egg until after it has been under the hen for a week, though experts can do so after the fourth day. It is very easy to distinguish a fresh egg by using an egg tester, and any kind of an egg tester will answer. Some examine with the hand alone.

EXPERIENCE AND THEORY.

No one can well experiment until he theorizes; that is, he should study all problems, come to some kind of a conclusion and then aim to demonstrate the truth of his reasoning. In keeping poultry, however, one must guard his investments and not incur risks of loss. Hence, all experiments must be conducted on a limited plan of operations. The beginner is seldom as cautious as he should be. It is a fault with the majority of persons that they have too much theory and too many plans and ideas of their own, which they proceed to put into execution at the start; and it is only when experience teaches them the fallacy of their theories that they learn to be more careful; but in the meantime there has been a loss of time, labor and money, which the beginner cannot afford, and he is thus crippled in his operations and his work is an up-hill one. Go slowly; theorize all that you can, but never venture too far with any theory before you

have, by practical experience, in a limited manner, demonstrated that your theory is correct and will lead to benefit.

COOPS FOR SITTING HENS.

As a precaution against storms and severe cold, all the coops for sitting hens should be placed in the poultry-house or under a shed. When the hens come off with their broods the coops should be carried into the barn during stormy weather, and they should be so constructed as to permit of carrying the hens and chicks in the coops. No matter how closely a hen may hover her chicks, she cannot protect them in winter when they are exposed to severe cold, and the chicks will sometimes become chilled during the day when they are picking up bits outside of the coop. All coops for hens with broods should be well littered with cut hay, and every care used to have them as warm as can be. When the hen is sitting, her nest should be in a warm place and her food placed where she can reach it without being compelled to go very far from the nest.

INQUIRIES ANSWERED.

Incubator.—J. C. T. writes: "Who has an incubator of a ten or twenty dozen capacity, that can guarantee satisfaction? State price."

REPLY:—There are a great many manufacturers. We do not know their prices.

Plan for Poultry-House.—W. F. S., Salineville, Ohio, writes: "Will you please give plan of poultry house for one hundred hens?"

REPLY:—See issue of January 15th. We are giving plans during the whole year, and will give others. A plan cannot well be described unless illustrated.

About Breeds.—M. L. W., Kinsman, Ohio, writes: "(1) Are the American Sebright, or Sebright Cochins, and the Wyandottes the same, or are they two distinct breeds of chickens? (2) Where can I get the pure breed of either kind, and where can I get the pure-bred Pekin ducks or their eggs? (3) How do you put on a tarred-felt roof? Will it not get wet and leak when it rains?"

REPLY:—(1) They are all merged into the Wyandotte. (2) From any of the breeders in our advertising columns. (3) It is first tacked down, on hoard roof, and coal-tar spread over it. Directions are always sent with the tarred felt. It makes a tight and excellent roof.

Incubators or Hens.—Miss C. R., Pollock, Mo., writes: "I have about thirty-six hens, and wish to hatch as many chicks as possible this spring. Here are some questions: (1) Which would be the more profitable way to hatch them, under hens or with an incubator? (2) What would a good incubator cost? (3) Is there more than one kind of Hamburg chickens? Please give me their full name or names."

REPLY:—(1) Until you learn the incubator, the hens are probably better. The difficulty is that hens do not sit when you desire them to do so, while the incubator can be put to work at any time. (2) From \$25 to \$100. (3) The Black, White, Golden Spangled, Golden Penciled, Silver Spangled, Silver Penciled, six varieties.

Crop-Bound and Exposure.—G. W. P., Big Rapids, Mich., writes: "(1) Some of our hens become stupid, and examination shows their craws full. I put one in a basket and kept her there three days, and the craw remained in that condition; seemingly, nothing passed from it. She seemed hungry. What is the matter and what is the remedy? (2) Occasionally we have a hen go blind. Otherwise, they seem well. Sometimes they recover and sometimes they die."

REPLY:—(1) Crop-bound results from eating long hay or dried grass, old rope or any substance that prevents the passage of the food from the crop to the gizzard. The birds are hungry because the food cannot be passed into the gizzard, and then to the stomach. The remedy is to remove the substances by an incision in the crop. (2) The blindness is caused by exposure to high winds, and sometimes by being with the male, from which they should be removed.

CORRESPONDENCE.

HEATING POULTRY-HOUSES.—G. W. H., Stevens Point, Wis., writes: "Inside a small, box stove place a small, coal-oil stove that costs about \$1. It will not cost five cents for twenty-four hours' heating."

THE COST OF THE FEED.—I am a constant reader of your valuable paper and you have some good articles in regard to poultry, and I see some readers ask you how much profit there is in poultry. I have kept a strict account for one year. On January 1, 1890, I commenced with 18 hens and 1 rooster of the brown Leghorn breed, and to September 15th they laid 192 dozen eggs. May 1st I set 45 eggs and raised 35 chickens. I sold my old hens on September 15th, and have had 17 young chickens to eat. Now I have just as good a flock as I started with, and my feed cost me for the year \$8.79 to January 1, 1891. I think they pay pretty well if properly bred and cared for.

Lyons, N. Y.

HOW'S THIS?

We offer One Hundred Dollars reward for any case of catarrh that cannot be cured by taking Hall's Catarrh Cure.

F. J. CHENEY & CO., Props, Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions, and financially able to carry out any obligations made by their firm.

WEST & TRUXAX, Wholesale Druggists, Toledo, O. WALKING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all druggists.

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Our Catalogue for 1891 is pronounced absolutely the best seed and plant book issued; printed in good legible type, on good paper, it excites the admiration of all. 664 varieties of Vegetables, Flowers, Flowering Plants, Small Fruits, Fruit- and Nut-bearing Trees, etc., are beautifully illustrated, as many as 38 of them being in colors. This catalogue is mailed free to all who ordered in 1890; but as the postage on the book alone is five cents, we must ask all others who are not customers, desiring a copy, to send us twenty-five cents in stamps for it; and in addition to sending our catalogue, we will also mail you, without extra charge, a packet of the wonderful BUSH LIMA BEANS, THE MOST VALUABLE VEGETABLE NOVELTY INTRODUCED IN YEARS; AND A PACKET OF THE NEW MARGUERITE CARNATION, THE FLORAL WONDER OF 1891. These two packets of seeds are worth 25 cents; so it virtually means the same thing as mailing our catalogue free to all who answer this advertisement. Address

WM. HENRY MAULE,
PHILADELPHIA, PA.

Mention this paper when you write.

USE FERRY'S SEEDS

BECAUSE THEY ARE
THE BEST.
D. M. FERRY & Co's
Illustrated, Descriptive and Priced
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For 1891 will be mailed **FREE**
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A Saw Mill for light power at a low price was introduced first by us. Many are in use; many are wanted. If you want one remember that

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are our figures, and that no better, substantial, durable small mill can be found. Address the old stand,

The Lane & Bodley Co.

ESTABLISHED 1851.

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The Best Brooder Ever invented for raising chicks; only \$5. Address **G. S. SINGER, Cardington, Ohio**, for circular.

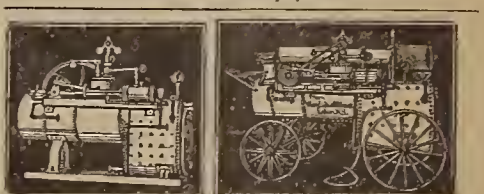
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MONITOR INCUBATOR
Twenty-three first premiums in one year. Large circular for stamp.
A. F. WILLIAMS, Bristol, Conn.

EGGS and FOWLS FOR SALE From 50 Varieties. **Largest Range in the West.** My fowls won over 600 first and 2nd prizes at 7 State shows last fall. For full description send three one-cent stamps and get the finest illustrated catalogue out, 8x11, 32 pages. **CHAS. GAMMENDINGER, COLUMBUS, O.**

IMPROVED INCUBATOR EXCELSIOR
Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Send 6c. for Illus. Catalogue. Circulars free. **CEO. H. STAHL, QUINCY, ILL.**

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER
Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid. One pack. 25c. Five \$1. 2 1/2 lb. can \$1.20; 6 cans \$5. Express paid. Testimonials free. Send stamps or cash. **Farmers' Poultry Guide** (price 25c.) free with \$1.00 orders or more. **I. S. JOHNSON & CO., Boston, Mass.**
Mention this paper.



STEAM ENGINES,
Portable, Agricultural, Stationary.

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Four-Drive Traction Engines,

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WOOD, TABER & MORSE,
Eaton, Madison Co., N. Y.

Catalogues and Prices sent on application.
Mention this paper when you write.

EXTRACTS
FROM CORRESPONDENCE.

FROM ALABAMA.—I live in the south-west portion of Colbert county, the mountainous, rough part, though the land on the creeks is good and we have good range for stock. Crops were poor last year. Land is cheap—50 cents per acre and upward. Corn is 50 cents per bushel; pork, 4 to 5 cents per pound. Stock is all low for cash. Hogs make good pork on the mast, so we don't have to feed much corn.
Dug, Ala. V. M.

FROM OREGON.—The winter here is warm and dry; there has been just enough rain for farming. Cattle on the range are fat. There are some vacant lands in the hills. Times are a little dull at present, but people have plenty to eat and to wear. This is a very good place for raising poultry. Fruit does well when the frost don't catch it. Vegetables grow finely on the damp lands, but the dry lands need irrigation.
Brownsboro, Oregon. M. G.

FROM ILLINOIS.—Hardin county is about the best poor man's country I have ever seen. Nearly everything the human family wants can be raised here. Our lands produce a good crop of nearly everything planted. It is healthy. The water is good. The soil is lime and sandstone. Land is worth from \$5 to \$25 per acre. Times are a little dull now. Getting out cross-ties and staves is the main work at this time. We have fine oak and poplar timber. There is no railroad in the county, but there is one surveyed and will be built soon. Hardin county lies on the Ohio river, with the Saline river as a county line on the north-west. It is a fine fruit country. We have good schools all through the county; the religious denominations are all well represented.
Lamb, Ill. T. F. M.

FROM SOUTH DAKOTA.—Custar City is situated in the heart of the Black Hills and in what is claimed to be the center of the greatest tin mining district of this continent. However, we are not in the mining business, but trying to find health and wealth. We find the climate here excellent for lung troubles and hope to find it conducive to wealth. The scenery here is grand, and while we are not making a business of photography or geology, we are securing some fine views of the varied scenery and making a fine collection of geological specimens which abound here in almost endless variety. Here we find mountains of mica, pure and clear as that used to illuminate doors of heating stoves. Several varieties of quartz, sparr, gneiss, etc., intermixed with mica, iron, tin, and other metals and minerals are found in abundance. The timber is almost wholly pine and is excellent. The forests are dense and extensive, many trees are thirty to forty inches in diameter. Ferns and moss are found in the fissures of the rocks. Contrary to our expectations we find the climate mild and salubrious; in fact much more pleasant than that of southern Nebraska or northern Kansas, whence we came. And fuel, well, we never used such wood before; we have ignited an ordinary stick of stove-wood with an ordinary match and had a good fire in a few minutes. We do not feel the cold here like in a prairie country; and up to the middle of January there has not been a day this winter that men have not worked out doors bare handed and without a coat. We are not here to stay, we are not booming the country, we have no property here for sale, we are simply stating facts. There are drawbacks, short seasons, no fruits, etc. For such cereals, vegetables, etc., as require only a short season, this country cannot well be beaten; but for general farming purposes it is not a success.
Custar City, South Dakota. I. E. C.

FROM WASHINGTON.—Vashon is an island about three miles wide by twelve long, lying in Puget Sound between the two great cities of the Pacific coast, Seattle and Tacoma. It is said to contain about twenty-one thousand acres, with a population between seven and eight hundred. The soil is what I would call shot clay with a good deal of gravel mixed in. In places it is a sandy loam. The small bottoms are a black soil with very little gravel, all heavily timbered, or have been, with fir, hemlock and cedar as the prevailing kinds, from one to two hundred feet high. General farming is not attempted. It costs too much money and labor to clear the land to use it for general farming. But after the wild nature is worked out, or with a little fertilizer, any kind of truck farming pays well; and for fruit of all kinds as far as tried, excepting the tropical fruits, I think it would be hard to beat. So far, small fruit has been made more of a specialty. Strawberries do extra well. Last summer we had one acre of strawberries that netted us two hundred dollars, saying nothing about what we made use of at home, which was no small item I can assure you. Two years ago the same ground was covered with logs. The general health is very good. As to society, it is good as can be found anywhere. In our neighborhood we have preaching and Sunday-school every Sunday. We have eight to nine months' school every year. There are three general stores, three brick-yards, one saw-mill, one shingle-mill. The Puget Sound Chautauqua assembly is located on the island. There is not a saloon on the island. No tramps, no snakes, excepting a few garter snakes, no

rats, no wild animals, no blizzards, no hail storms, no very bad wind storms, no more rain than we need, very little snow in winter and not a sign of it yet this winter. Nor has the ground been frozen. Nothing but the very best of soft water in wells or springs. Wells are from ten to forty feet deep. There are a good many grouse, some quail and some deer, no rabbits, no doctor. We would like very much to have a good doctor, if we could find one that would like to retire from regular hard service and have his own truck and berry patch and do what little doctoring and setting of broken limbs we might need. Land is selling all the way from \$25 to \$125 per acre, and some places well improved much higher. But that is not high for land that will bring an income of from one to two hundred dollars a year. We can go to Seattle or Tacoma every day in the week except Sunday; fifteen miles to either city; fare, fifty cents.
Vashon, Washington. J. T. T.

FROM FLORIDA.—In a former letter I referred to the drawbacks to be met with by the settler here, but mentioned only one—the scarcity of efficient help. This is still a trouble which limits operations and prevents success—for those who are unable to perform all the manual labor necessary to insure it. There are some who have lived here some time, and are not adapted to the work, who claim that one can't make money here; that where one has to make the land, as they express it—that is, fertilize it thoroughly before a first crop can be raised—it is impossible to get ahead any. The soil, most of it, is a poor, white sand; and even where it is darker and seemingly richer, it won't grow white beans unless fertilized. There is an abundance of muck here—enough to last for untold ages—and it is usually to be found not far from the land needing to be fertilized. It is of the best quality, a pure, vegetable mould, mostly the rotted roots or trunks of the scrub or "saw" palmetto. It contains nitrogen, and must be rich in potash, as these creeping stems contain a large percent of that fertilizer. Phosphates are abundant and cheap now, and numerous "plants" are being established to manufacture them to make them immediately available in crop raising. Also, one can get a good supply of phosphoric acid by going some four miles and hauling loads of oyster shells, which make, when burned, a lime much superior to that bought of dealers. Of course, it would involve quite an outlay to fertilize much land in this manner, and as far as I have experimented, it costs just about the same as to buy good brands of commercial manures. But when well fertilized the soil is good for several crops, and three crops can be raised on the same land in the twelve months. With one crop alone more can be made on an acre than on many a good-sized farm at the North. One little, go-ahead woman here, who owns a first-class northern farm, 125 acres of the 200 under the plow, with a good tenant on it, declares she had rather depend on the product of about two acres that she has planted here than on that of the 200. And yet these two acres are not a fair sample, as they are only partly fertilized and badly in need of draining. So it can be seen that there are many men or women of many minds in regard to this question of "getting on" here. Another drawback is that insects are troublesome part of the year, as might be expected in so temperate a climate. But these seem to lose their power to destroy in the winter and spring. I have succeeded in raising a garden each summer we have been here, without using any insecticide. Mice and flies are less troublesome here than in any other place where we have ever lived, although our shanty (called a house) invites their entrance in numerous places. But oh, the cockroaches! Words fail to express the pest they are in a poor house; but into such a one as a well-to-do family North would usually live in they never enter. Given a decent house, a woman's work is immeasurably easier here than there. Lack of time forbids my further particularizing, and I will sum up by saying that though there are many drawbacks, each is counterbalanced by many good features. Summer is pleasant; hot, murky weather is almost unknown, and there is always a pleasant, fresh ocean breeze. Most nights are delightful; mosquitoes are sometimes bad, but can be easily managed. Now, just after Christmas, it is like a New York September. Strawberries and vegetables are here and coming on, where one has had "gumption" enough to plant and care for them. On our own table we are having an abundance of radishes, lettuce, cucumbers, tomatoes, melons, etc.
Cleveland, Fla. O. K. C.

FROM SOUTHERN ARKANSAS.—All the government land in Arkansas is surveyed and in market. There are also thousands of acres of state and school lands in nearly every county, and much of it to be had cheaper than the government land. Partly improved places of all sizes and sorts can be had cheaper than government land, considering the improvements, such as buildings, clearings, fences, etc. If a settler has but \$500 it is better and cheaper to get a place near a town or railroad station, with a house and some cleared land, at \$5 to \$10 per acre, and pay part down, balance on time. All the northern people down here get as near the villages and stations as possible, to avoid the isolation and loneliness of living back in the woods in the solitude, which is hard on the women and children; and they would surely get homesick in such a location. In

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SEEDS for the Garden, Farm and Field.
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To Paint the Lily

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To those who have never used our Seeds we say: "Try them." A trial will be a much better advertisement for us than we can pen.

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The Popularity of our Seeds increase year by year, and we deal direct with more Planters than any other Seed House in the World. In the busy season we receive daily from 3,000 to 5,000 letters and postal cards.

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Burpee's Red Etna Pepper, New Golden Self-Blanching Celery, Vandergaw Cabbage, Burpee's Hard-Head Lettuce, The Delaware Watermelon, and The Matchless Tomato.—One full-size packet of each, with plain directions for culture, will be mailed to any address on receipt of 25c., or any three of these Choice New Vegetables for 16c. (3 two-cent stamps). Our Farm Annual for 1891 will be mailed free to all favoring us with an order. All our Seeds are warranted. Write us to-day.

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With Colored Plates Painted from Nature. 168 pages. Free. Full of hints to those who know, and valuable information for those who want to know about Farm, Garden and Flower Seeds, Plants, Shrubs, Lilies, Gladioli and other Summer-Flowering Bulbs. Rare Novelties are described, many of which can only be had direct from us. It tells how to get valuable premiums, including Mrs. Rorer's New Book, just out—Free. Write to us at once and secure free this valuable Farm Annual. Write to-day.

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JAPANESE WINE BERRY. No new fruit has ever caused the controversy ways. It is distinct from all other berries in every way—a perfectly hardy, beautiful ornamental plant. Berries are at first covered with a burr with a reddish moss on it, like a Moss Rose bud; the stems are also covered with this moss. Fruit large and borne in clusters of 75 to 100 in a bunch. Beautiful glossy scarlet. Very sprightly, sweet and juicy, of a delicate, luscious flavor, peculiar and superior to all others. For canning and preserving, it is grand, retaining its fresh, sprightly flavor cooked in any form. Very prolific. Price, strong plants, 50 cents each, \$5.00 per dozen.

ELEAGNUS LONGIPES. New Japanese Fruit, growing like an immense currant bush. Well-established plants will bear over a bushel of fruit. Berries are oblong, as large and resembling a dark-red cherry, with a small, soft pit. Flavor is delicious—rich, juicy, and sprightly, with a cooling, soothing effect. Superior to the sour cherry, with the fine tart taste of the cranberry. A New Flavor, a New Fruit, all are enthusiastic over when eaten. For a MARKET FRUIT this will have a new field of profit. For jellies and preserves we consider this superior to almost anything else. VERY SCARCE. 25 cents each.

NEW CRANDALL TREE CURRANT. Combines more excellencies than any of the small fruits now in general cultivation. In size it ranges from the very largest cherry currants to the size of Concord Grapes, berries five-eighths of an inch in diameter being very common, while those measuring three-fourths of an inch are easily found, and a few have reached seven-eighths of an inch. It attains the height of 7 or 8 feet, forming an enormous bush. Fruit jet black and very fine in flavor. More sweet and pleasant than any currant. A Bargain, only to be had from this advertisement. 50c., 3 for \$1.

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FAY CURRANT HEADQUARTERS.
GRAPES
BEST & CHEAPEST
NEW GRAPES
Esther, Rockwood, Eaton, Moyer and all others New and Old. SMALL FRUITS. Catalogue Free. GEO. S. JOSSELYN, FREDONIA, N. Y.

order to sell cord-wood, shingles and ties, one must be near a railroad. The railroads must be made first before the wild lands are desirable for actual settlers. People do not generally want to go back very far from a village to get cheap land, unless several families go together and locate where they are sure a railroad will soon come. We have about 100 steam saw-mills near the Iron Mountain railroad, between Little Rock and Texarkana. The Iron Mountain railroad (Gould system) owns something like one million acres along it's line, for sale on long time, at \$3 to \$5 per acre. The government land inside of railroad limits is \$2.50 per acre. No man with a family should come here or anywhere else in the West or South with less than \$500 and the ability and willingness to practice economy and do much hard work. We have all kinds of land—sandy, clay and a mixture of both, some gravelly spots, though not enough to be much detriment. The uplands, covered with pine and oak forest, are generally undulating enough for drainage, but not hilly, the inequalities being only about ten to one hundred feet up and down. The river and creek bottoms are nearly flat, and much more fertile than the uplands, and best for corn and oats. The uplands are best for fruits, vegetables and cotton. We have a good, free school system, and have generally eight months of school per year. Teachers' wages are \$30 to \$75 per month for either sex; average about \$45. Fall is probably as good a time as any to come South. Springs of good, palatable, soft water are moderately plenty in the uplands, and good, soft water wells can be had almost anywhere at ten to fifty feet deep. Cisterns can

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be built at small cost; and there are many running streams. Malaria is not serious on the uplands. Our family of seven persons have not had a chill in our six years' residence here, or paid a dime to the doctors. The prevalent diseases in Arkansas are about the same as in the adjoining states. Don't think the lawlessness and shooting, supposed to be so prevalent in Arkansas, will average any worse than in adjoining states. Most of the hangings at Ft. Smith are for crimes committed in the Indian Territory. I am a New Yorker, and have always spoken my mind freely on religion and politics, also voted to suit myself, and have no trouble. It is generally better to tread rather softly on the toes of ignorant people, as ignorance and intolerance go together everywhere. Arkansas is not without drawbacks. There is no earthly paradise in this state or anywhere else on Uncle Sam's domain that I know of, though in my opinion the drawbacks here are not as serious or numerous as in some other localities. As a fruit grower, I would say that railroad extortion is the blackest cloud in my sky; a drawback which can and will be remedied when the government controls the transportation of all products, which will be in the not far distant future. Another great want here is more money in circulation. There is not half what we need for the wants of business. It is now almost impossible to sell a farm or anything of much value for cash down. This great want can also be remedied, and will be, I hope. For a full stock of information on the resources of Arkansas, send your name on a postal card to M. F. Locke, Little Rock, Ark., who has charge of the Bureau of Immigration and is paid by the state.
Malvern, Ark. A. B.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the querist should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Poultry Book Wanted.—S. L., Elkhead, Mo. Send 25 cents to this office for the "Complete Poultry Book."

Killing Timber.—C. H., Champion, N. Y. To kill timber, cut it during the latter part of July or first of August.

Paper on Floriculture.—F. L. A., Delta, Col. "Park's Floral Magazine," published by Geo. W. Park, Libonia, Pa.

Silos in the South.—G. W. H., Stevens' Point, Wis., wishes some of our readers to give their experience with the silo in the South.

Cranberry Plants.—H. D., Kenton, Ohio. You can get cranberry plants of the northern and north-western nurserymen who advertise in our columns.

Lard Oil.—J. C., Princeton, Ind. The lard as it comes from the hog is pressed at a low temperature. This separates the lard oil from the oleine and stearine, which are used for making candles and bogus butter.

What is a Tuber?—J. J. G., Pawnee City, Neb. Webster defines it as follows: "A fleshy, rounded stem or root, usually containing starchy matter, as the potato or arrow root; a thickened root-stock or subterranean portion of a stem." The potato itself, therefore, is a tuber. The onion is a bulb.

Bean Planter.—A. T. Y., Chicago, Ill., writes: "I wish to plant beans in rows three and one half feet apart, dropping one bean every ten inches."

REPLY:—A good corn drill can be adjusted to do the work for you. If you have only a small patch to plant, you can use a hand corn planter for the purpose.

Replowing Sod.—G. S., Inglesfield, Ind., writes: "I have a field of very tough sod, which I plowed in November. I want to plant it to corn next spring. Shall I plow it again in the spring? The sod lies very loose."

REPLY:—If you have one of the improved harrows, it will not be necessary to replot the ground. A good harrow will put it in fine condition.

Smut in Wheat.—R. J. M., Crystal, N. Dak. Smut in seed wheat may be destroyed by an application of a strong solution of blue vitriol. Place a large basketful of wheat in a tub containing the solution. After it has remained in the solution for fifteen or twenty minutes, raise the basket up and set it on cross-sticks over the tub, and allow it to drain. The wheat can be readily dried by spreading it out on the barn floor and stirring it occasionally.

Beans and Bean Weevils.—J. D. K., Thayer, Mo., asks: "How many navy beans are required to plant an acre; also, how can the weevil be prevented from injuring the crop for market?"

REPLY BY JOSEPH:—Quantity of seed required depends somewhat on width of rows and on quality of seed. About a bushel should be sufficient. The weevils may be destroyed by exposing the newly harvested beans to dry heat of about 150° Fahrenheit for thirty-six or forty-eight hours.

Book on Bees.—E. D., St. Louis, Mo., writes: "(1) Can bees be transferred from a log hive? If so, how can it be done? (2) Tell how to make a handy box hive. (3) How is a queen-excluder made?"

REPLY:—To answer your questions fully would require a great deal of space. You need a good book on the subject. This office can furnish you with one of the best, the "Bee-keeper's Guide, or Manual of the Apairy," by Prof. A. J. Cook. Price, \$1.25.

Killing Osage Orange.—A. C. H., Oswego, Kan., writes: "Tell me how to kill Osage orange hedge fence."

REPLY:—Grub it out. First trim it so that you can get close to it with a plow. Then plow close along each side, throwing the dirt away from the hedge, and make the trenches as deep as possible. Have a sharp share and cutter on the plow so as to cut off the roots easily. This will help the work of grubbing it out.

Alfalfa-Cotton-Seed Meal.—J. B. F., Columbia, Oklahoma, writes: "Some say that if alfalfa clover once gets set in the ground it cannot be eradicated. Will cotton-seed meal do to feed to cows that are with calf?"

REPLY:—Alfalfa has large, long roots, but is not hard to eradicate. One single plowing, with a good, sharp plow will end it. Yes, Cotton-seed meal is an excellent food for dairy cows.

Washington Seeds.—C. G., Healdsburg, state not named, asks: "Does the agricultural department at Washington furnish free seeds and plants, and can you get what kinds you call for? Who shall I write to for them?"

REPLY BY JOSEPH:—Yes, the department furnishes seeds, such as they are. You cannot get what kinds you call for, but usually such as the department has to distribute, mostly ordinary, cheap stuff of little value. If you desire to try them, however, address your member of congress, or write to the Department of Agriculture, Washington, D. C.

Siphoning Water.—Mrs. J. M. writes: "I want to siphon water about one hundred and twenty rods. The highest point, which is from fifteen to twenty feet high, is about twenty rods from the spring. It is a good fall from there."

REPLY:—It can be done but the pipe must be put down very carefully. There must be no leakage at the joints. The siphon can be started by attaching a pump at the lower end. If it stops running it can be started again in the same way. A siphon of that size is apt to give you considerable trouble.

Root Crops for Cattle.—J. P. G., Ashland, Ariz., asks whether carrots, mangels or sugar beets are best, also how many pounds of seed it takes for an acre, and whether the seed should be soaked before planting.

REPLY BY JOSEPH:—In nutritive value carrots stand highest, sugar beets come next and ordinary mangels last. Still, all three are excellent for cattle, when fed with grain and coarse fodder in proper proportions. Mangels and sugar beets are more easily and more cheaply grown than carrots. On the whole I would give sugar beets the preference, unless I would decide to grow all three. To plant an acre of any of them requires about four pounds of seed. No need of soaking it before planting. Firm the soil properly and it will germinate promptly. Soaking seed before planting has gone out of fashion with good growers.

Hand Seed Sower.—H. M. V., Woodbury, N. J., asks whether there is a hand seed sower that can be held in the hand and graduated to sow seeds from the size of beans down to radishes. There are a number of such devices. You will find them advertised in the catalogues of leading dealers, perhaps also in advertising columns of agricultural papers.

Hollowness and Bust of Celery.—S. L., Pheux, R. I., wants to know how he can prevent celery plants from growing hollow or getting rusty. I have never had cause of complaint in regard to hollow stalks, where dwarf, stocky-growing sorts—Golden Heart, White Plume, etc.—are grown in good, rich soil and under good culture. To prevent rust is a problem not easy to solve. It can be done, however, by providing half shade and a constant supply of moisture.

Ashes-Composting Manure.—W. H., Portland, Ind., writes: "Shall I scatter ashes as I have them, or put them in piles and scatter them in the spring?—Will fresh horse manure, mixed with sawdust, if put in piles, rot enough to apply to crops in the spring?"

REPLY:—Scatter the ashes as you haul them. Put the manure in piles. In a couple of weeks fork it over into new piles, putting the outside into the center. If composted properly, it will be ready for application in a few weeks.

Methods of Greenhouse Heating.—D. B. B., Abrams, Wis., writes: "I intend to build a greenhouse opening from my furnace cellar on south side of house. Can I heat it by running a hot-air pipe from the furnace into the greenhouse, or must it be heated some other way?"

REPLY BY JOSEPH:—The trouble with the proposed method is the dryness of the heat. You will have to counteract it by the free use of water. With plenty of pans kept supplied with water standing near the pipes, the difficulty may, in a measure, be overcome. Hot water and steam heat are more congenial to plant growth.

Wheel Hoes.—"Beginner," Cokeville, Pa., asks a number of questions about garden wheel hoes. There are a great many serviceable ones. I use Gregory's finger weeder and Planet Jr., both double and single wheel hoe. The Ruhlman, which goes between the rows, also does good work. Have never tried the Daisy implements, but from description I have no doubt they are all right. I might name a number more that will answer, but I hardly think that the Planet Jr. double wheel hoe is yet equalled as a "general purpose" tool. I would not do without it. Any person of ordinary intelligence can use it, and learn to use it well, without special instruction.

Subsoiling in Clay Soil.—W. F. V., Canton, Ohio, writes: "A party in this vicinity is introducing a subsoil attachment to ordinary plows, that can be set to cut from two to five inches deep in the bottom of the furrow, and leave the ground loose but unturned. Will this be of special benefit in raising small fruits and garden vegetables?"

REPLY BY JOSEPH:—If the subsoil is hard and impervious to water, it certainly will be an advantage to loosen it by any means through which it can be most successfully and most economically done, and thereby increase the soil's capacity for the absorption of water, and the chances for soil aeration and chemical action.

Light versus Insects—Spinach.—B. H., Mammoth Spring, Ark., writes: "Is it a good plan to keep a lamp lit in my garden during the early spring nights to kill the various millers? When is the proper time to sow spinach for early spring salad?"

REPLY BY JOSEPH:—A lantern placed over a large dish filled with water and a little kerosene, or a barrel coated with tar inside, will dispose of many night-flying moths and bugs, but I do not think it will do much good in protecting garden crops from insect attacks. This is, indeed, slaughter in the dark—killing friends and foes alike. Spinach for earliest spring salad should be sown in September or October. If it was neglected then, you may sow just as early in spring as the ground can be worked.

White Potatoes, Sweet Potatoes and Clover.—D. L. S., Vineland, asks: "What is the best rotation on sandy loam with sweet potatoes, white potatoes and clover, using Mape's potato manure. What is the best fertilizer for sweets?"

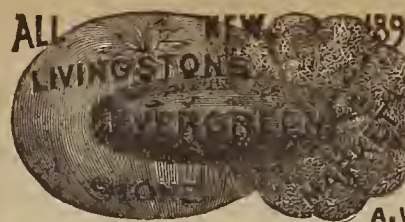
REPLY BY JOSEPH:—My personal experience with potatoes on sandy loam in New Jersey, speaks rather in favor of the use of Mape's potato manure. For white potatoes, apply half broadcast and half in the rows; for sweets, apply all in the hill. White potatoes, sweet potatoes, clover—clover plowed under for white potatoes—makes an excellent rotation. Gregory's cabbage compost—alternate thin layers of muck or fine soil, bonedust and fresh wood ashes, all well moistened and allowed to ferment, then worked over—will also make a good potato manure.

Mending Rubber Boots.—G. L. F., Weston, W. Va. In reply to your query we republish the following: Get some virgin rubber of your druggist and also some patching. Put an ounce or two of the gum into three or four times its bulk of benzine; cork tightly and allow it to stand three or four days to dissolve. Wet the boot with benzine for an inch or more around the hole, and scrape with a knife. Repeat this several times until thoroughly cleaned, and a new surface exposed. Wet the cloth side of the patching with benzine and give one slight scraping, then apply with a knife a good coating of the dissolved rubber, both to the boot and the patch, and allow it to dry until it will not stick to your fingers; then apply the two surfaces and press or slightly hammer into as perfect compact as possible, and set away for a day or two before using.

Muriate of Potash, Ashes and Gypsum.—C. W. K., E. Tainter, Mass., asks: "How much muriate of potash is equivalent to one bushel of unleached hard-wood ashes? Will it pay to use gypsum as an absorbent in stables at eight dollars per ton where manure is worth eight dollars per cord?"

REPLY BY JOSEPH:—A bushel of good, fresh, hard-wood ashes has about three pounds of potash and about one pound of phosphoric acid. Six pounds of muriate of potash contains about three pounds of potash, but no phosphoric acid. The bushel of ashes has a fertilizing value of about twenty-five cents, the six pounds of muriate of about thirteen cents. Eight dollars per cord for stable manure seems to me a pretty high price. I would not pay it, but rather depend on concentrated fertilizers. Even if stable manure could be bought at a reasonable figure—say not over three or four dollars per cord—the free use of gypsum or land plaster (sulphate of lime), or of kainit in the stables and on compost heaps, would pay largely.

Odorless Phosphate—Forcing Asparagus.—J. B. R., Shelbyville, Ill., writes: "Is the fertilizer advertised as 'odorless phosphate' as good as nitrate of soda for forcing vegetables? Would it be practicable to run tiles, with a furnace at one end, between



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of asparagus and thus force it for early market, or would this treatment shorten the life and future usefulness of the roots?"

REPLY BY JOSEPH:—The "odorless phosphate" is a waste product of the iron industry, usually known as basic slag or Thomas slag. It contains about twenty-one per cent phosphoric acid, claimed to be in a readily available form, although, strictly speaking, it is insoluble. Where phosphoric acid alone is needed, as on grain and dairy farms, this substance may do very well; still, I think its present price is too high. It cannot take the place of nitrate of soda or other nitrogenous fertilizers for forcing vegetables. The proposed plan of forcing asparagus cannot be earnestly considered. Forced plants are only good for one season, and new, strong plants have to be provided every year. The proper place for forcing asparagus, of course, is under the greenhouse benches and in forcing-pits or hot-beds, but not in the open ground.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Ringworm.—P. F. J., Kenton, Ohio. If your horse has ringworm apply the remedies prescribed in several recent answers, given to similar questions. The "breaking out on the body, resembling boils," was probably caused by dirt and want of grooming.

Spavin.—S. S. L., Buckhannon, W. Va. Your description of the lameness points toward spavin, but does not enable me to make a definite diagnosis. I hardly think that West Virginia winters are mild enough to make any horse feel comfortable at night, if compelled to stay out doors.

Blind Staggers.—S. J. W., Bridgeville, Del. You can prevent it, in most cases at least, by a suitable diet (rational feeding and keeping), good hygienic conditions and judicious exercise. As to a remedy, that is altogether a different thing. The treatment will largely depend upon circumstances, and it is always best to send immediately for a veterinarian and to leave the treatment to his judgment before the case becomes desperate and recovery impossible.

Lice.—A. B., Portersville, Pa., would like to know if there is anything that can be fed a yearling colt to kill lice upon it?

ANSWER:—Since the lice are not in the stomach, but on the surface of the body, between the hair on the skin, nothing that can be fed will kill them. The remedy must be applied where the lice are. Cleanliness and good grooming is the first requisite, and if this is applied, genuine Persian insect powder, if dusted in between the hair, will drive off the lice. Immediately after the application the stall must be thoroughly cleaned, and all bedding, manure, etc., be removed, because a good many lice tumble off before they are dead, and afterwards revive again.

An Obstruction in a Cow's Teat.—J. P., Round Hill, Conn., writes: "I have a cow with an obstruction in one of her teats. Before we can get a drop of milk out of it, we have to insert a knitting needle. After withdrawing it the milk flows as well as usual."

ANSWER:—Instead of a knitting needle use antiseptic catgut, cut it in suitable ends, and before inserting it dip in a mixture of subacetate of lead and oil (1:3), and fasten the projecting end with a strip of adhesive plaster to the teat, so that it cannot fall out. When milking, milk away the first milk, and after milking insert a new end of catgut, but see to it that the latter is in no way contaminated by dirt before the insertion.

Bots.—W. S. B., New Straitsville, O. Bots, the larvae of *Gastrophilus* equi and other kinds of genus *Gastrophilus*, may become injurious, but it does not proceed from your letter that the same caused serious injury to your colt. When you say the bots were full-grown, you are mistaken, for they are not yet full-grown in December, and not until toward spring. What you say of the color of the mucous membrane of the stomach shows that you are not familiar with the natural color of that membrane, which presents a whitish color in the interior or cardiac portion, and a velvety, reddish-gray color in the posterior or pyloric portions of that organ. If you had looked further, very likely you would have found the cause of death. It does not appear from your letter that the bots killed your colt.

A Fistula.—R. H. S., Arvilla, N. Dak. The treatment of a fistula, and that is precisely what the wound you describe is, now requires treatment by a competent veterinarian. But as you live in far-off North Dakota, I will endeavor to give you a brief description of the treatment necessary. In the first place you must, by careful probing, perhaps with a whalebone probe, ascertain the depth, extent, and possible complications of the fistulous canal, also whether or not a foreign substance, which supports the suppuration, is present. Such a substance, no matter what it may be, must be extracted. This done, care must be had to provide for the pus a free and unimpeded exit. Pus, like water, does not run up hill. Hence, it will, in most cases, be necessary to enlarge the existing opening, or even to make a new one, draining the lowest part of the fistulous canal. All this accomplished, the callous walls of the old fistulous canal must be destroyed. This is usually done by caustics, such as sulphate of copper, corrosive sublimate, etc. If it has to be done by injecting a solution, the injection invariably must be made upward through the lowest opening, because if made downward a new canal may be formed in the connecting tissue between the muscles, by the force of the injection and the weight of the fluid. It is, whenever applicable, a better method to introduce a tug of absorbent cotton saturated with the solution, and then renew it twice a day or oftener. In your case, you may use as a caustic, first, a concentrated solution of sulphate of copper (1:4). If you have to inject it, use a glass syringe; at any rate none made of metal. As it is impossible to describe, without having

seen the case, at what time you have to cease the use of the strong caustic, you may prepare enough, say, for eight or ten injections, and then each time you have made an injection, fill up your bottle with clean water, so that the quantity will remain the same, but the strength be constantly weakened. Make two injections a day, and keep the wound scrupulously clean, but when washing it, use nothing but clean, warm water, no soap. Continue the injections with your finally much-diluted material until healing has set in.

Big Head.—C. W. B., Benkleman, Neb. What you call big head may have several causes. If it is only a slight enlargement of an inflammatory character, and not distinctly limited, it may be due to a bruise, etc., especially in a young animal, in which the plate of bone covering the roots of the teeth is very thin. In such a case, especially if of several weeks standing, repeated applications of an ointment composed of biniodide of mercury and lard, 1:24, rubbed in once every three or four days, has often a good effect. What you consider as a broken tooth is probably a milk molar, ready to drop out after its root has been absorbed. It is worth while, though, to make a careful examination of the animal's mouth, because it is very well possible that an irregularity of some kind, a damaged or diseased tooth, for instance, constitutes the cause of the swelling.

Blood Spavin.—A. T. Y., Chicago, Ill. Blood spavin consists in an abnormal enlargement of the vein (vena saphena) on the inner interior surface of the hock joint, and is a comparatively rare occurrence. There is no cure. Sometimes an operation of very questionable value, is performed for the purpose of removing the enlargement. Bog spavin consists in an abnormal expansion of the capsular ligament caused by too great an accumulation of synovia. It also has its seat on the inner anterior surface of the hock joint. A permanent cure of this blemish, too, is but seldom effected, because the removal, usually, is only a temporary one. If you mean this latter blemish, you may use either gentle pressure, applied by an elastic bandage of woolen flannel, to be renewed twice a day, or may use some iodine preparation—tincture of iodine, iodine dissolved in cod-liver oil, 1:16, or an ointment of iodide of potash and lard, 1:12, etc.—but not too much must be expected of any treatment. The iodine preparation may be applied once a day or once every other day.

FARM FOR SALE Consisting of 320 acres; 240 in cultivation, 20 acres suitable for orchard, 80 acres pasture; small spring on place; situated 12 miles from Lewiston, Idaho, and 3 miles from Alpowa, Wash. To be sold on reasonable terms. For further information apply to J. Molloy, Lewiston, Idaho.

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Accept this offer at once, as we may withdraw it. The offer is good now.

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When any one takes advantage of the above offer, the person securing and sending the new subscriber is not entitled to any other premium or reward except one year's subscription to this paper, but the new subscriber can take any premium offered in connection with the paper, by paying the regular price for the paper, including the premium wanted; for example, the regular price of the Peerless Atlas and one year's subscription to this paper is \$1. The new subscriber can have the paper and the Atlas by paying \$1, and the person that goes out and hunts up the new subscriber can have this paper one year free as a reward for his trouble, but is not entitled to any other premium or reward.

The above offer applies to this paper only, and all subscriptions must be for this paper.

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FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio

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We cannot keep back numbers, because our subscription price is so low that we cannot afford to hunt up back numbers.

The only sure way to avoid missing a number is to renew two weeks before your subscription expires.

Our Fireside.

THE OLD LOVE.

Soft is the light on the summer sea,
When the sun in the west is low
And the billows sigh to the shells that lie
In the sunset's mellow glow;
But the beauty gleams in vain,
And the tints that wax and wane
And the song of the surge
At the ocean's verge
Seems naught but a dirge,
For O!
My thoughts fly far, 'neath the evening star
To my love in the long ago.

The wind comes up from the sighing sea,
And the sea-bird's wing of snow
Fades from my sight in the clasp of night,
Like joy in the arms of woe:
And I dream by the billows blue
Of a heart that was leal and true.
And I row by the tide,
Though fate may divide
My faith shall abide,
And grow;
And my heart ever turn while the bright stars burn
To my love in the long ago.
—Samuel McInturn Peck.

THE NUGGET OF GRUB-STAKE GULCH.

BY JAMES OTIS.

CHAPTER V.

CONVALESCENCE.

THE following morning the stranger had so far recovered as to be able to converse rationally with those to whom he was indebted for his life, and when, at noon, Little Bill ushered, with an air of triumph, the physician into Seth's house, it appeared as if he had been summoned without sufficient cause.

"I allowed the man was dying," he said in an impatient and disappointed tone, "otherwise my friend, who got the drop on me before he explained what was wanted, might have had some trouble in forcing me to ride an hundred and forty miles."

"Mr. Morey appeared to be, and I believe was very sick when you were sent for," Seth replied; "but I had no idea the messenger intended to bring you at the point of a revolver."

"My orders was to fetch him dead or alive, an' I didn't reckon on givin' him much of a chance to pump lead inter me while I was coaxin' him to come," Bill replied, as if he could see nothing out of the usual course in his summary proceedings.

"Well, I'm here now, an' we'll have a look at the wound," the doctor said, opening his case of instruments; but he did not begin the work at once, for at this moment Alice entered the room, and he turned to stare at her in undisguised astonishment.

"This is my sister, Miss Hammond, Doctor—"

"Taylor," the physician added; and Seth continued:

"She had a few simple remedies, and with them succeeded in breaking the fever."

"A patient who wouldn't get well under the care of such a nurse deserves to die," the doctor said emphatically; and Morey added:

"Even a tenderfoot like myself understood as much as that, and the proof is that I am feeling decidedly better. A little attention to the wound, and then I will try to repay you for the long ride."

"The boys will see to that part of it," Little Bill said quickly. "Come over to the Palace when you're through carvin' him, an' we'll show you what kind of a town St. Julian is."

With this invitation the messenger left the house, and Doctor Taylor began the "carving."

When the physician's work was finished he said, leaning back in his chair with the evident intention of cultivating the acquaintance of the invalid and his nurse:

"You'll be as sound as ever in a couple of days; but it was Miss Hammond, not me, who has saved you from what would have probably been a severe illness."

"I am afraid the debt of gratitude will be greater than I can ever pay," Morey replied. "She also saved me from being hanged, as you may possibly know."

Little Bill had not told this part of the story, and Seth was called upon to describe the scene at the proposed lynching-bee.

The doctor appeared to think the mistake a natural one, and, to Alice's surprise, even viewed the whole affair in a comical light. He laughed heartily at times, and congratulated Morey upon his escape from death by saying:

"Two or three little scrapes like that one will give you a mighty good idea of the country, providin' you're lucky enough to live through them."

"If my education is to be purchased at such a price I would prefer to remain ignorant. The property I own didn't cost so much but that I can afford to lose it if any more of those delicate attentions are to be apprehended."

"Have you bought land near here?" Seth asked in surprise.

"Yes, through some parties in Frisco; but

at that time the camp hadn't taken on its claret-like name."

"Do you know where the land is located?"

"That can easily be told by overhauling the documents which are to be found in one of my pockets," Morey replied; and Seth handed him a small package of papers.

"Look them over yourself," the invalid said, and his host had but just begun to read when an exclamation of surprise burst from his lips.

"Why you own next to mine; the one a Greaser proved up!"

"I was told a Mexican had been working it. Is it good for anything?"

"I have been hunting in vain for color close alongside of it, and in two months have found no more than I believe the previous owner buried himself."

"Luckily there is no reason why I should stay here any longer than I wish," Morey said; and then as he glanced toward Alice, who was in the adjoining room preparing dinner, he added quickly, "I'm bound, however, to see how badly I have been taken in. Suppose we go into partnership, Hammond? Your claim is probably as valuable as mine, and the only advantage will be that we shall have increased facilities for digging."

"When you are able to look the property over I'll accept the proposition, provided you are then willing to repeat it," Seth replied gravely. "I have not had much experience in such matters; but yet I feel that a true vein will be struck thereabouts."

"Then I'm a member of the firm of Hammond & Morey," the invalid said laughingly, "and your sister shall have a third interest in the very valuable claims."

The business arrangements were interrupted by Alice, who summoned the doctor and her brother to dinner, and while they were eating she brought Morey a tempting-looking broth.

"Can you manage to feed yourself?" she

"Now see here, stranger, the Junction is a low-down kind of place, with more Greasers than men in it, while St. Julian is jest humpin' herself. Give that crowd over there the go-by, an' settle down here with us. I'll chip in a lot on my quarter section where you can put up a tent, an' three of the boys shall come 'round every mornin' when trade's dull so's you can keep your hand in by dosin' 'em. What's more, they shall pay for it too. We won't stick at nothin' for the sake of helpin' along the boom that's struck this 'ere town. Is it a bargain?" and Mr. Grant winked at his companions as much as to say that they should unite with him in trying to effect a favorable decision.

"What Joe says goes," Jake shouted. "Why, doctor, you'd be strikin' a reg'lar snap here, 'cause the boys are lively, an' we're willin' to give you a benefit by gettin' up a shootin' match if you're down on your luck."

Other reasons equally as alluring were given in the hope of inducing the desired adjunct of the town to make a change, and when it was possible the doctor promised to think the matter over.

"I'll give you an answer in a day or two," he said in conclusion. "St. Julian is a mighty lively town, and I'd like to make the deal if the matter can be arranged."

"Then that settles it," Mr. Grant shouted, with a resounding thump on the bar. "If anything interferes send word over here, an' we'll soon straighten matters. I ain't so young as I used to be, but when it comes to cleanin' out a town like the Junction, Conestoga Joe is there every time, an' them chumps have got to be mighty haudy if they get away with him."

These eloquent remarks were received with such a storm of applause that the proprietor of the Palace could do no less than "set 'em up agin," and while this formality was being complied with Seth made his escape.

He went directly home, and there found Morey and Alice chatting as if they had been friends for years, a fact which caused him to say:

"I reckon you won't need much attention to-night, and both of us may as well go to bed."

"Certainly," the invalid replied heartily. "I intend to get up to-morrow, and by the next day we

"I reckon that means you an' I had better go into the other room to give him a chance," and Bill calmly walked into the adjoining apartment, followed, as a matter of course, by Alice.

The visitor seated himself in a chair near the door, much as if it was his intention to remain an indefinite time, motioned that Seth's sister should make herself comfortable, and began abruptly:

"If it wasn't that Conestoga Joe is only waitin' for this same kind of a chance I wouldn't a' rushed things so; but as it is I'm bound to go ahead 'cordin' to surface indications, an' if I don't strike a true vein there cau't be much harm done."

"I am afraid I don't understand you," Alice said in a tone of perplexity. "What has Mr. Grant to do with your offering to take care of the invalid?"

"Why he'd come here to-night instead of me if business hadn't been so rushin' at the Palace. Say, do you know I've struck it rich?"

"Does that mean that you have found gold?"

"In pockets, Miss, in pockets. I reckon the claim I'm on now will pan out big."

"I am glad to hear it," Alice replied heartily. "In a place like this all should rejoice at another's good fortune."

"But they don't, an' I ain't sure whether I've got the right kind of color."

"I thought from what you said that there could be no question about it."

"That depends on what I'm pannin' out now, an' I ain't sure as I know how to work the claim."

"I don't understand what you mean," and now Alice looked thoroughly perplexed.

"It won't take long to give you an idea of the vein I'm tryin' to strike. I own four of the neatest claims that ever struck a tenderfoot's eye, an' can lay out jest as many as may be needed. If Conestoga Joe hasn't made any mistake about the boom he says has struck this town, I'll come out top of the heap; but that ain't enough."

"What more do you want?" Alice asked, understanding only a portion of his remarks.

"I want to marry you," Bill said abruptly, blushing like any school-girl, and then continuing so rapidly that it was impossible to interrupt him, "if you'll say the word I'll put up a house that'll knock the Palace higher'n a hurt boot, 'cause I'm gone on you for a fact. I'll wear a biled shirt every day; 'tend to runnin' the shebang, an' agree to get a couple of Chinese to wait on you to the Queen's taste. Say, is it a go?"

"I'm sorry Mr. — Mr. —"

"Call me Bill," was the mournful interruption, "an' if you're countin' on copperin' my bet it'll kinder make the thing go easier. I never did have much luck anyway."

"I'm sorry, Bill," Alice said softly, "that you had any such idea, for it can never be, if you mean that you want to marry me. I consider you one of my best friends; but it isn't well for you to think of more."

"You can't stop my thinkin'," Bill replied in a voice which he vainly endeavored to render steady; "but so long as this thing hasn't panned out as I counted on, will you do me a favor?"

"Certainly; anything in my power."

"Then don't let on to Conestoga Joe that I made sich a cussed fool of myself."

Before she could reply he had rushed out of the house, and Seth came in to learn the cause of the noisy departure.

CHAPTER VI.

THE DOUBLE CLAIM.

Nothing would have pleased Ned Morey better than to play the part of invalid many days in order that he might be waited upon by the girl who had saved his life; but on the second day after the physician called he looked so strong that even his fertile imagination could devise no excuse for remaining indoors.

Thanks to an almost perfect constitution, the wound had already begun to heal, and gave him very little trouble, although, as a matter of course, any violent exercise might have been attended with disagreeable results.

The first business he transacted was regarding his horse, which had been taken in charge by Mr. Grant, and in doing this he was forced to visit the Palace, where, just at that moment, were several of the miners who had been most prominent in the effort to lynch him.

This unimportant fact, however, did not cause the actors in what had been very nearly a tragedy, the slightest embarrassment. They greeted him with a cordiality emphasized by noise, and but for his decided protests would literally have forced him to drink with each in turn.

"Better have one social ulp," Mr. Grant said

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persuasively, as he began to decorate the bar with glasses, "an' then we'll call it square."

"I am sorry to be obliged to refuse," Ned replied; "but owing to the present of a bullet from some gentleman in town, the doctor declares that it would be very dangerous for me to take anything in the way of stimulants."

"All hands feel ashamed of that, Morey;" and the worthy proprietor's voice almost trembled with suppressed sorrow. "It gives a stranger such a bad idea of the town to know the boys can't shoot a little bit. It's what you might call a disgrace; but I don't reckon any of 'em'll miss the next time."

"Don't apologize for not killing me," Ned said with a hearty laugh. "It was fortunate their hands were a trifle unsteady, and also that the remainder of the performance was postponed a few hours."

"Oh, that's all right;" and now Mr. Grant spoke in a cheery tone. "Mistakes will happen, you know, no matter how careful a feller may be. Say, come over some time an' I'll show you where we planted the sneak what got away with your hoss."

"Thank you; it will be very pleasant to see where I would have been buried, and I shall take advantage of the first opportunity. What I particularly came for this afternoon was to pay you for the care of my horse: Hammond says you have him."

"Yes; turned him in with my ponies; but out this way we ain't in the habit of chargin' sich little accounts to our friends. Leave him where he is 'till you need him. I'll go ball that there isn't a thief in this section of the country as dares to trail him out of my corral."

Ned thanked the generous proprietor; had very little difficulty in persuading the gentlemen to allow him to pay for a certain amount of liquid refreshments to be consumed by themselves, and then asked where Seth's claim was located.

Mr. Grant stepped on the veranda to point out the direction, and once there took advantage of the opportunity by saying:

"If you're thinkin' of buyin' land 'round here--an' the biggest kind of a boom has struck this town--I've got the best quarter section to be found within a hundred miles, which I'm willin' to split up with you, seein' how we'd like to have you stay with us."

"I will remember the proposition if I conclude to make any more investments. Just now, however, I own the claim next to Hammond's, and want to see what that is worth before taking hold of anything else."

"So the Greaser unloaded on you, eh?" Mr. Grant said reflectively. "Well, you're stuck; the claim ain't worth the powder to blow it into the next county, an' Seth's is about the same value. Why I wouldn't grub-stake a man if he owned fifty sich claims."

"It won't be a very serious matter if I never get a cent out of the land; but I propose to make one trial at least," and Ned walked away, the proprietor of the Palace muttering as he returned to his friends:

"It'll come pretty tough if I can't do what a Greaser has done, an' I'll finger his pile before many days, or my name's Jacob, which it ain't."

Ned had no difficulty in finding "Hammond's folly," because while yet some distance away, he could see its owner sitting near the scene of his labors as if in deep study.

"Hello!" he shouted. "What's the matter? Trying to decide how it will be possible to get all the gold out?"

"So you're taking a walk, eh?" Seth said gloomily; and after a short pause he added, "Yes I was trying to figure how I could get the gold out; but my calculations went no further than the amount I invested here. With that in my pocket once more I'd never put pick in the ground within a long distance of Grub-stake Gulch."

"Anything new happened to discourage you?"

"No; it is the same old story. I force myself to believe I shall strike a vein; but it is pretty hard work to have faith when everything looks unpromising."

"Don't get discouraged so easily;" and Ned seated himself by his friend's side.

"So easily? If four months of hard work with not a teaspoonful of color to show is not enough to make a fellow doubt, then I'll own up to a lack of faith."

"You found some at the start?"

"Yes; but the claim had been salted; there can be no question about that."

"And my property is most likely in the same condition."

"Probably the Mexican didn't even take the trouble to do that much, inasmuch as you were a long bit from here at the time it was purchased."

Ned walked a short distance away to an excavation which Seth had said was the "hole" he owned, and after a hasty examination of the surroundings returned, saying as he threw himself on the ground:

"I've got a proposition to make, Hammond, and I want you to consider it seriously. One of these claims is worth about as much as the other, since both are believed to be valueless. I wish, however, to be certain there is nothing here; but it will be some time before I can do any very hard work. As I proposed day before yesterday, let us form a partnership, hire two or three men, and make a short job of learning how badly we have been done up in the double claim. You can take charge of the operations, which will be an offset to the money I advance."

Seth shook his head.

"That is a one-sided arrangement to which I cannot agree. You feel under some obligations and want to square matters by paying me in that way."

"Now you wrong me, Hammond. I swear that even if I had not been the especially invited guest at the lynching-bee, but had come into town with all the pomp and circumstance of a conqueror, the same proposition would have been made, with the slight exception that I should not have stipulated to be allowed to remain idle. It is cheaper to do the work quickly, paying laborers therefor, than to stay here month after month, since the cost of living would soon amount to more. Now is it a bargain?"

"It is almost throwing money away."

"That may be; but yet I shall try it alone unless you join me, and will be obliged to loaf until the wound has healed. By means of a partnership the work can be begun tomorrow."

Seth could no longer doubt but that the offer was made purely in a business sense, without any regard to what had so lately happened, and after some further conversation he consented, the articles of the agreement being nothing more formal than a hearty handshake.

Until nearly nightfall the partners discussed the manner in which the venture should be started, Seth proposing that his plan of labor be abandoned entirely and a new one formed, and only when all the details had been decided upon did they turn toward home.

If the gold seekers had left the double claim half an hour earlier they would have arrived in time to welcome a very gorgeous visitor, concerning whom Alice made no mention even to her brother, until several days later.

Although the invalid's appetite was all that could have been desired by a well man, she thought it her duty to prepare a series of tempting dishes for supper, and was busily engaged in her work when the trampling of horses' hoofs in the immediate vicinity of the house caused her to glance involuntarily out of the window.

A visitor had arrived, and his general appearance indicated very important business.

It was the proprietor of the Palace, Mr. Grant. He was mounted on a spirited buckskin pony, over whose yellow hair the flowing skirts of the brass-buttoned coat waved in striking contrast. A silver-trimmed sombrero, top-boots and jingling Spanish spurs completed the outfit, so far as the rider was concerned. As for the steed, he seemed literally weighted with ornamentation; from the heavy saddle to the wicked-looking bit depended glittering chains, "furbelows and fardens" until the leather was nearly hidden by metal.

Mr. Grant also led by the bridle a trim little horse on which was a side-saddle, and whose decorations were even more lavish than the one he bestrode.

Under ordinary circumstances the proprietor of the Palace was not an agile man, owing to superfluous flesh and an asthmatic tendency; but on this occasion he leaped to the ground much as a boy of fifteen might have done, and knocked at the door so gently that the noise could well have been mistaken for the sigh of a June zephyr.

It was impossible for Alice to make any mistake as to why the second pony had been brought, and her cheeks were of a rosy hue as she opened the door in response to the soft summons.

With many a bow and alleged courtly flourish, Mr. Grant said in a languishing tone:

"Most respected Miss, knowing as you was fond of ridin', an' seein' as how you wouldn't keep the pony I sent the mornin' after you got here, I've come for a great favor."

"One glance at that side-saddle is enough to tell me what you are about to say," Alice replied, struggling very hard so prevent a smile from visiting her lips. "I should dearly love to try that beautiful little horse; but Mr. Morey and Seth will soon be home for supper, and as the cook of this mansion I must be here to receive them."

"Your brother can fry a piece of bacon to the queen's taste, as I know by experience, so there'll be no harm done if you leave him to shift for himself while I show you the natural attractions of St. Julian. We don't count on havin' anything as fine as Seth had sent on from the east, for nothing could be fairer than you, Miss;" and at this point Mr. Grant bowed until it surely seemed his spinal column would be rent asunder; "but I want you to see what a reg'lar garden of Eden we've got, an' corner lots are bound to go sky high now you're here."

These compliments, supplemented as they were by the most wonderful contortions of body, caused Alice so much embarrassment that she could think of no fitting reply, and could only say:

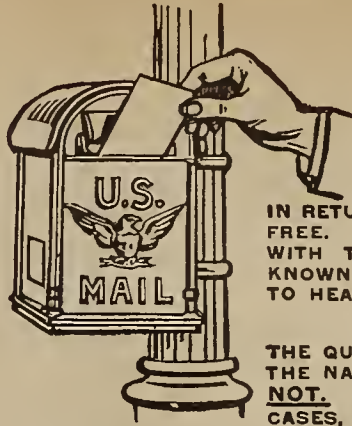
"Won't you come in, Mr. Grant? Seth will soon be home."

"Then you don't count on takin' a ride to-night?"

"However much I might like to, it would be impossible, for even if Seth can get his own supper, I couldn't neglect a guest."

"Meanin' that you can't think of goin' 'cause that tenderfoot is here?" and Mr. Grant allowed himself to speak in an angry tone.

"Because the gentleman who has been treated so cruelly in St. Julian is in our charge," Alice replied quite sharply.



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"Now don't fly off, Miss," Mr. Grant said imploringly. "I didn't mean nothin' by that, only it kinder put me out for a minute. You see I was countin' on doin' the honors of the town, an' the boys will have the drinks on me when I go back to the Palace an' say you wouldn't ride after all this fuss."

"I am very sorry, Mr. Grant; but you must certainly understand the situation of affairs, and realize that I can't leave a guest to cook his own supper."

The proprietor of the Palace could not trust himself sufficiently to make any reply. He bowed very ceremoniously, cast one look of reproach at the woman he would have honored, mounted his steed after considerable difficulty, and rode away like a very crude model of Jove in his wrath.

On the veranda of the Palace were seated half a dozen of Conestoga Joe's best customers, waiting to see him ride by with Seth's sister, and these he passed with not so much as a glance of recognition, when he dismounted in front of the establishment and was greeted with certain remarks not calculated to make him feel any more comfortable in mind.

Stalking inside he refreshed himself after his own fashion, and then beckoned for Big Bill to join him.

"You needn't ask any questions," he said angrily, before his friend had an opportunity to speak. "She wouldn't go, an' I know the reason."

"What is it?" and Bill spoke so quickly and eagerly that Mr. Grant looked at him suspiciously.

"Have you been tryin' your hand at that game?" he queried thoughtfully.

"Well, seein' how you've been done up so brown I don't mind sayin' that I did try to strike the vein."

"What did she say?"

"I reckon you've got a pretty fair idee by this time. Anyhow, she let me know it wasn't any use prospectin' on that lead."

"See here, Bill, it's all the fault of the tenderfoot;" and Mr. Grant spoke in a hoarse whisper. "If we can drive him out this town we'll toss up to see who shall have her, an' then go in to win. Will you line me?"

"How can you make him skip?"

"I'll 'tend to that part of it. Say it's a go, an' the thing will soon be in workin' order."

"An' you won't try to get the best of me after we've done him up?"

"It shall be a square toss, an' the one who wins has a lone hand."

"Then I'm with you," Bill replied emphatically; "but we mustn't lose any time."

"You know me, Bill," Mr. Grant said with an eloquent gesture, as he placed two glasses on the bar.

[To be continued.]

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The summer sun behind the hills had sunk away from sight,
But his fiery beams flaunted in the face of coming night;
And the western skies were hounded by a gold and crimson har,
And from 'mongst the purple cloud-drifts peeped out the evening star;
When, with many groans and murmurs, good, honest Farmer Jones
Sat down upon the door-step to rest his aching bones.

The sunset dimmed and faded, and the song of whelp-poor-will
Came floating o'er the meadows, from the forest dark and still;
And the frogs were hoarsely croaking in the marsh land far away,
And the dewy breeze was laden with the smell of new-mown hay;
But the farmer, vexed and weary, saw no beauty, heard no sound;
His head was resting on his hands, his eyes were on the ground.

His rugged face, with wrinkles seamed, was darkened by a frown,
For Neighbor Smith had told him that the price of wool was down!
And so he sat and grumbled in the twilight by himself,
And searched his mind for cuss-words that he'd laid upon the shelf,
'Till at last his guardian angels were completely put to rout;
Then Farmer Jones lost all control, and fiercely he broke out:

"Confound this farmln' business—the whole blamed thing, I say!
I can't git nothin' for my wool, nor nothin' for my hay;
The corn won't be more'n half a crop, an' hogs aint wuth a cent;
(Just here he shook his horny fist to give his feelings vent.)
An' taxes are so ternal high, they're most up to the moon.
I'm hiest if I don't emigrate from this world purty soon!

"An' there's that pesky hired man must fall down thro' th' mow!
I wish he'd broke his awkward neck; he's no account nohow;
But 'stid o' that, he breaks a leg, an' now he's laid up here.
The doctor says he'll do no work for up'ards of a year;
An' so I'm left wthout no help, for Jim's away to school.
I spect that scape-grace hoy'll come home an eddicated fool."

The late farmer paused for breath, hut looking up just then,
He saw the cows file down the lane, so he broke out again:
"By dad, an' there's th' marketn'! The butter an' th' algs,
They wouldn't keep a heggar in a passel of old ralgs.
I'm dummed if I don't sell the farm, an' move away to town!"
He took his red handanna out, and mopped his shining crown.

"An' there's that blasted Jim o' mine; he doesn't seem to keer.
I wanted him to take the place an' farm it on th' sheer;
But no, to college he must go, an' a har'l'o' money spend.
I'm dinged if he wa'n't horn a fool, an' will be to th' end.
There comes Debby from th' milkin'. I don't b'lieve she'd complain
If all th' hay in chrils'eudom was soakn' in th' rain!"

Sweet, pleasant-faced Aunt Debby came toddling toward the house.
She was plump as any kitten and as quiet as a mouse;
A dear, good Quaker lady—just here I'll pause to say
That she ruled her hlg. rough husband in a firm but gentle way.
She knew that John was angry by the way he mopped his head,
And, too, in coming down the lane she'd heard the words he said.

She set her milk-palls on the ground and drove away the cat,
And said: "I heard thee grumblng, John. What is thee angry at?"
Awhile in sullen silence he sat and fiercely gazed;
Then the stalwart frame was shaken and a troubled face was raised.
"Why, dum it, Debby!" Here he paused, and smote his brawny chest,
And then in milder accents, he told her all the rest.

She smiling stood, and listened to his lamentations long,
And then she said: "John, don't thee know thee's doing very wrong?
Thee has a good farm clear of debt, and money in the hanks,
And yet thee sits here growling, instead of giving thanks.
Complaining of the price of crops! Thee gets what others do.

And if thee has to labor hard, why so thy wife does, too.

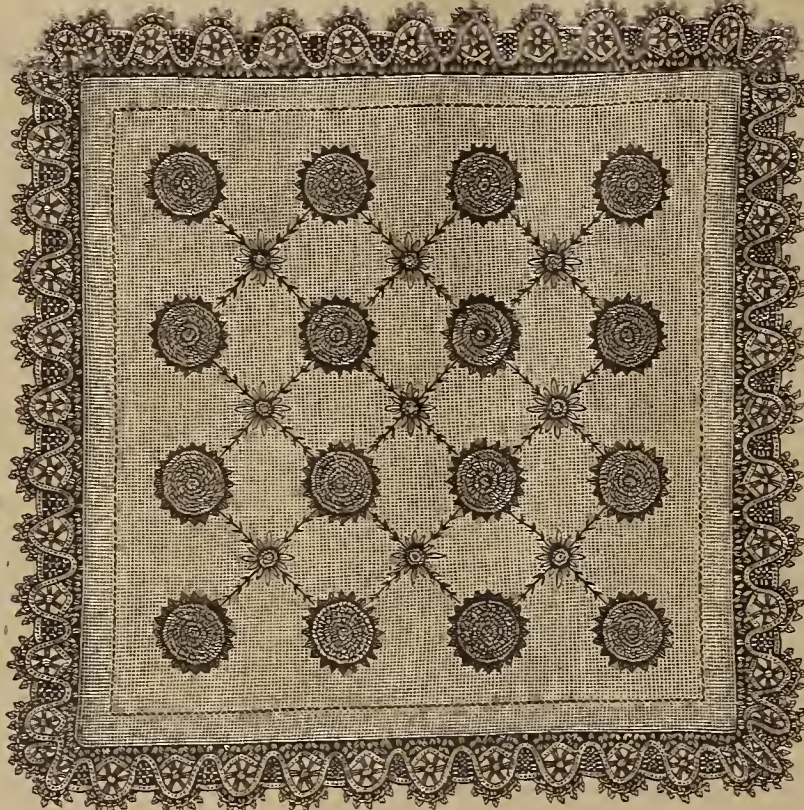
"And just because the hired man is laid up, injured, here,
Thee raves about the corn and hogs as tho' 'twere famlne year.
But, John, the very worst of all, thee stormed about our sou,
As though he were a criminal, that some great crime had done;
And all because he's gone to school—the very thing thee named—
And striving hard to please us both. Thee ought to be ashamed!"

She took the milk-palls from the ground, and toddled from the spot.
His face was strangely working, and the tears were falling hot;
And ere he went to bed that night, he knelt upon the floor,
And prayed for God's forgiveness as he never had before.
When he'd finished his petition to the heavenly throne of grace,
An angel stood beside him with Debby Jones' face.

S. Q. LAPIUS.

HOME TOPICS.

WHIPPED CREAM.—To whip cream properly, it should be thoroughly chilled first, and if desired, also sweetened and flavored.



LINEN TABLE SQUARE.

Any good egg-beater can be used to whip it. Skim off the froth as it rises and pile it on a plate until all is whipped. An otherwise simple dessert can be made into a really elegant one by this simple addition. A dish of canned peaches or pears with whipped cream is a dessert to be despised by no one; it is also a pretty addition to blanc mange or jelly. Whipped cream is not used as much as it should be, considering its cheapness and the ease with which it is prepared. "But," some woman will say, "I cannot spare the cream; I must make butter to sell and buy the family groceries." Would it not be just as well, perhaps better, for the health and comfort of the family if more cream and milk were used and less cake and pie, tea and coffee?

ABSTINENCE DURING LENT.—Although we may not abstain from meat during Lent, as a religious rite, and for the welfare of the soul, yet there is no doubt that this observance is for the welfare of the body. Coming, as Lent does, in the latter part of winter and early spring, it is just the time when the body needs a change of diet; and whether we call it Lenten fare or not, we will find fish and eggs at this season both wholesome and desirable, and that the abstinence from meat will go far toward preventing the headaches, las-

situde and other ailments that frequently beset us in the spring, and which we are apt to call malaria.

BAKED FISH.—Shad, white fish, bass and blue fish are all nice, baked. Have the fish nicely dressed, leaving the head on. Make a dressing of bread crumbs, butter, salt, pepper and a little parsley; moisten it a little, but leave dryer than if for poultry. Fill the fish and sew up the incision. Put it in a baking-pan with a teacupful of boiling water and a tablespoonful of butter. Let it bake half an hour, basting frequently, and when nearly done, dredge a little flour over the top and let it brown.

Beets, stewed tomatoes and parsnips are nice to serve with fish. Slices of lemon may be used to garnish the dish and a slice served with each piece of fish.

BOILED FISH.—Boiling is the most delicate way of cooking fish. After dressing the fish and removing the head, wrap it in a napkin and put it into boiling,

salted water. When done, take it out carefully, remove the napkin, lay a clean napkin or fish-cloth on a platter, and serve very hot with white sauce.

WHITE SAUCE.—Heat, in a double boiler, a pint of thin cream, or milk and cream; when it is scalding hot add a heaping tablespoonful of flour rubbed smooth with the same quantity of butter and a little salt. Stir all together until it thick-

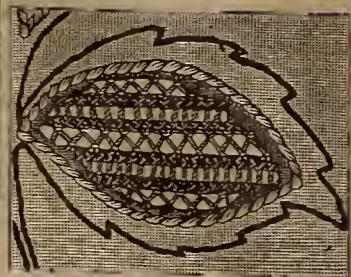
ens and is very smooth. Serve in a gravy-boat.

SEASONABLE SHOPPING.—One of the cares of the springtime is the wardrobe; and it is a consummation devoutly to be wished to have this all in readiness when warm weather demands a change. Already stores are showing light-weight flannels and serges, gingham, sateens and other cotton goods, and fashion papers are giving styles suitable for their making.

It is better, I think, to replenish house-

warm days of April and May are at hand. Then the spring house cleaning comes, and it is so comfortable to know that the spring clothing for the family is all ready

for the first warm days. It is best to begin by taking a day to look over the summer clothing left from last year, and de-



WORKING DETAILS OF LEAVES.

cide what will do as it is and what can be made over to advantage; also make a list of all that must be bought. When this is accomplished the work is well under way, and the necessary shopping can be done with less trouble if you know just what is needed and the quantity of each fabric.

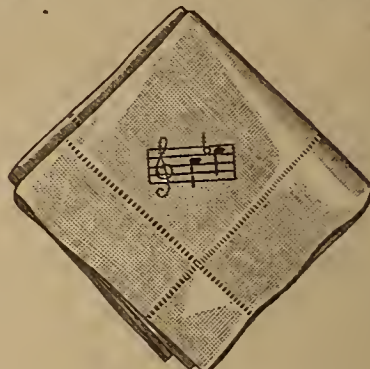
MAIDA McL.

It's wiser being good than bad;
It's safer being meek than fierce;
It's fitter being sane than mad.
My own hope is, a sun will pierce
The thickest cloud Earth ever stretched;
That after last returns the first,
Though a wide compass 'round he fetched;
That what began best, can't end worst,
Nor what God blessed once, prove accursed.

APPARENT FAILURE.—Browning.

EMBROIDERED LINEN WORK.

The embroidered linen squares used so much for table centers, are sought for now by our housekeepers as an addition to their linen closet. Those done by their own hands are, of course, the most desirable. Our limited space does not permit us to give it in its full size. The first illustration is twenty-five inches square, and when finished is edged with lace. The embroidery is done in soft filo silks, in shades of white that is from white to a



HANDKERCHIEF CORNER.

very pale gray, which has the effect of shading the white so effectively that it looks like shading. If preferred, it can be done in gold silk of one color, and as shown in the working pattern, the leaves are woven in a lace stitch and the material cut away underneath, so as to give it a lace-like effect.

The second cover is twenty-nine inches square exclusive of the lace, which should beset on around it. The simple and yet rich pattern shows two sprays meeting from opposite sides and worked in gold-colored flax thread, which, as may be seen in the single separate leaf, is couched down with white at regular intervals. A broad, open-work hem marks off the inner square.

A beautiful lunch-cloth of linen, worked with very large pansies, was displayed in one of our art stores. Small doilies, with one large pansy in the center, went with it to lay on the small bread-and-butter plate, which is now used so much.

Dainty table appointments cannot be dwelt upon too much, as they are dear to every woman's heart. There never was a time when so much pride was taken in these things, nor a time when nice things of this description were in the reach of everyone.

A lady who is neat with her needle can also, in her spare time, make many things of this kind to dispose of to someone whose time is too full to do them. The exquisiteness of the work enhances its value. It would be useless to undertake it unless a degree of success is assured. To be able to paint with the needle is quite as much an accomplishment as to paint with the brush. Nothing endears home so much as to have its adornments the work of the home maker.

Home is, then, something more than four square walls. Beware, though, of having too much, and of its being incon-



LINEN TABLE SQUARE.

hold supplies, sheets, pillow-cases and table linen in the fall; but if this was not done, there is no better time for buying these, or muslin for underclothes, than the present. It is much easier to sit at the sewing machine through the cold, stormy days that we expect in late February and March than when the bright,

gruous with the surroundings. Make your selections, too, in articles of a high grade, as they always look well, even long after they have passed out of fashion. Nowadays it would be almost impossible to keep up in the fashion of fancy work. The people who keep our art stores are constantly importing new designs and new material from abroad. The more elegant they are, the more they are sought for.

A lady who is neat with her needle can use the new and novel way of marking handkerchiefs for her musical friends. The music staff and clef is worked in black silk, and the initials a letter of the staff in its proper place. If the initial is different from the staff letters, a larger letter can be worked over the entire staff. It would be better to have it different from the staff in color.

CHRISTIE IRVING.

NEIGHBOR BASSETT.

I want to tell the sisters some of Neighbor Bassett's ways of managing her household affairs. She is one of those sprightly, tidy women, that seem to know just which horn of the dilemma to take hold of to land her on the safe side of her business.

One morning a few weeks ago I ran over to her house to borrow some baking-soda, and there she was, tidying up her kitchen, and every few minutes peeping into the oven, fixing the dampers, regulating the heat, and on the alert for fear something would burn. I sniffed around, and the odor that came from the baker was't that of cake or bread, so I said:

"Are you trying something new again?"

"Oh, not at all; just fixing up my sausage for summer use, just as I have these many years;" and she deftly turned a steaming crock on the stove.

"Do tell me your formula," I said; "that is one of the things I fail in."

"Oh, it is very easy when you once know how," she smilingly answered. "Just press your ground sausage into gallon crocks until they are full; then set them into the oven and bake until they are cooked all through, say two hours, or even longer. Then take the crocks out of the stove, put a plate and a weight on them and set away to cool. When the grease has fried out of the sausage until it rises to the top and cools, take off the plate and weight; and if there isn't grease enough on top to keep the air all out, melt clear lard and pour over them; tie up closely and set away in a cool place, and they will keep till harvest."

Well another of her managing ways was

yard or more. They didn't look as dainty and pretty as they did before, and I said:

"Why did you fix them that way?"

She laughed at my meddlesome questions and said:

"You know they have never been washed, and lace curtains shrink so badly. Now, they will not need washing this



COLORED EMBROIDERY FOR CLOTH.

winter, and in the spring I will let the hem out and wash them, hem them up the desired length again, and they will look almost new."

"Um, yes," I said. "Will you lend me your head-piece when I fix things after this?"

"With pleasure," she replied. "It is like old 'silver,' the more it is used, the brighter it gets."

RUTH RUSSETT.

Man's work is to labor and leave—
As best he may—earth here with heaven;
'Tis work for work's sake that he's needing;
Let him work on and on as if speeding
Work's end, but not dream of succeeding!
Because if success were intended,
Why, heaven would begin ere earth ended.

PACCHIAROTTO.—Browning.

THE CONDITION OF WOMEN.

The most conspicuous as well as the most beneficent of the changes which this century has witnessed, has been a steady and great improvement in the condition of woman as a result of inventive progress. Within the memory of persons who are not very old, the average woman's life was one of cheerless drudgery. Sixty or seventy years ago there were comparatively few American families whose "women folks" did not do all the housework without the aid of servants. It was hard work—brutally hard we should call it in these days—for it was unrelieved by any of the varied appliances that have since been devised to facilitate or obviate it. And this tedious toil, including spinning,

weaving and churning, was performed in houses whose inmates had never heard or dreamed of the thousands of elegancies, luxuries and comforts that are now within the easy reach of the "common people." Then there were but two kinds of occupation open to our young women—housework and school-teaching—and the latter was accessible to but a limited number, and at small compensation. When invention began to open up

manufacturing industries, the area of woman's work grew immensely. Then came the sewing-machine. Meantime, the progress of civilization brought about a better appreciation of women's value as teachers, and they began to supersede men in that great calling. Manufacturing industries, in which women had a place, multiplied rapidly between 1840 and 1860. Since that

date the telephone, the typewriter, increased demands for stenographic clerks, and a constant advancement of correct notions of woman's place in the world, have opened avenues in which vast numbers of women and girls are usefully and happily employed. There are few occupations now to which women are strangers, and the condition of society is immeasurably improved by this multiplication of the employments of woman. Greater than the influence of the schoolmaster or the preacher has been that of the inventor in bringing about the emancipation and elevation of the "better half" of the human family.—*Domestic Monthly*.

God be thanked; the meanest of his creatures
Boasts two soul sides, one to face the world
with,
One to show a woman when he loves her.

ONE WORD MORE.—Browning.

FROZEN EGGS.

"Here, mother, are some frozen eggs! What shall I do with them?" is an exclamation often repeated through the winter and spring months. The mother sighs, and replies that they be put in a basin and covered with cold water to draw the frost out. Mother mine, did you ever try putting the eggs into real warm water instead of the cold? Not hot enough to cook them, of course, but warm as you would wash your hands in. You never will use cold water on frozen eggs again, I'll warrant, after once trying the warm; the yolks will be just as soft and beat up as nicely as fresh ones; and usually the yolks are full of little hard lumps that it is impossible to beat out. Putting in the warm water makes the crack in the shell unite so quickly that the white does not have a chance to ooze out and waste.

After standing in the water for an hour or two, where the water has been kept from getting very cold, the eggs should be taken out and laid by themselves, to be used first, as frozen eggs will not keep more than a few days, before spoiling, after they have been thawed out. I hope the farmer sisters have taken good care of their hens this season, as eggs have been so high priced. Give warm feed and plenty of water; see that the latter dish is often replenished to keep the hens from drinking ice water.

TWO FAMOUS WHITE HOUSE LADIES.

Of the women who have had fame and greatness thrust upon them by their husbands becoming presidents, but two stand out as possessing more than average brains or showing more than negative characters. Mrs. Washington's tastes were for him and housekeeping, and the official duties imposed upon her as "first lady" were a ceremonious bore.

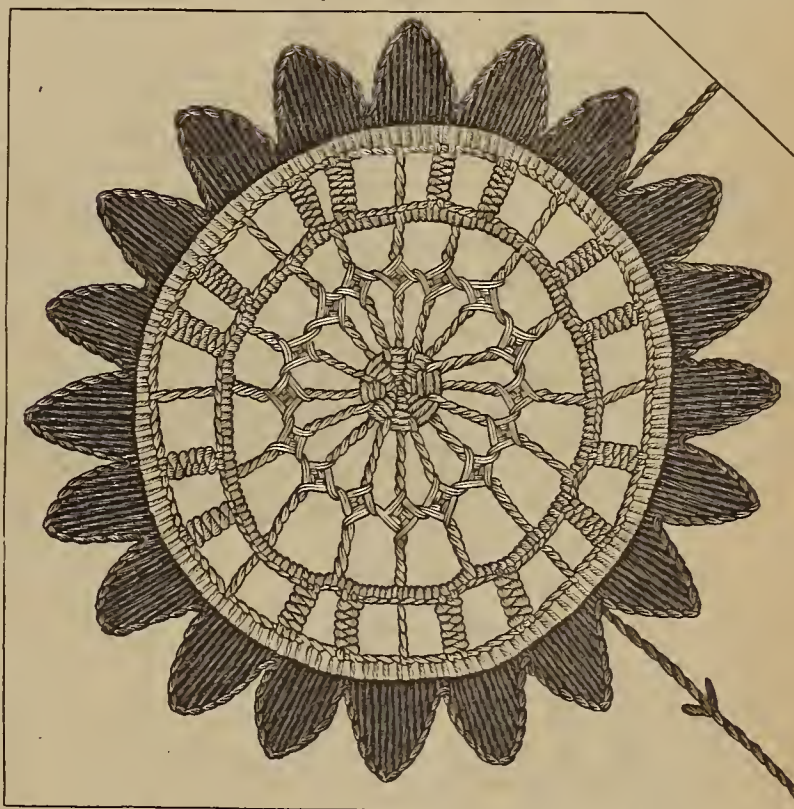
She went through them with dignity and according to rule, but she counted time thus spent as her "lost days." But Mrs. Abigail Adams, wife of John Adams, is famous on her own score as well as by accident of the position of her husband as president. She had remarkable political insight, and was the first woman in America to demand equal rights for women, and urged her husband, pending the adoption of the constitution in 1776, to remember the women, and said they would not hold themselves to obey the laws in which they had no voice. Of course "John" was talked down in the conven-

tion, but her son, John Quincy, afterward took up her side in congress.—*Pittsburg Dispatch*.

Mrs. May French Sheldon, who is to lead an expedition to the Congo in Stanley's footsteps, is a physician of no mean ability, and has also won a reputation as an author and sculptor. She has an enviable position in literary and scientific circles in London, where her husband is the manager of an American banking house.

Miss E. O'Duffy, a young woman about twenty years old, is one of the largest importers and dealers in wild animals in this country. She is the daughter of a Dublin druggist, and has a natural liking for the business. Miss O'Duffy is not the first of her sex to enter this calling, for some of the most successful dealers in birds and animals in Europe are women.

The many friends of Miss Charlotte Kirkover, the artist, will rejoice to learn that she has so far recovered from her long illness as to be able to resume her work. She is now executing an order for one of the millionaires of Cleveland for a punch bowl of great beauty. The design, which is her own, is artistic and unique. For the work alone she is to receive \$50. Buf-falonians are only just awakening to the fact that they need not send to New York and Boston for artistic china decorators. Indeed, some of Buffalo's best women artists supply these same cities with work which is not appreciated here, and it has happened that all unwittingly a Buffalo dame purchased the work of one of Buf-



STAR IN RETICELLA EMBROIDERY FOR CLOTH.

falo's artists in a high art crockery shop in New York.

INQUIRIES ANSWERED.

Mrs. ROBT. MCF.—It does fruit no harm to have the thick mould on it that you speak of. It is a sign it is keeping well.

CHEAP FIRE-KINDLER.—Geo. W. Hungerford, Stevens Point, Wis. Fill an old tomato can with any kind of rags or corn-cobs, pour on kerosene and you have the cheapest and best fire-kindler ever made.

PICKING DUCKS FOR MARKET.—Pick the duck with the index finger and thumb, commencing at the head and picking back. Press the thumb hard against the skin, so as to get the down all off with the feathers. Do not scald the duck until it is nicely picked. Then tie the legs together and tie a string around the body, to hold the wings in their proper place. Pour a little scalding water over the body, and the duck will look plump and nice and is ready for market. EUGENE M. #

Upper Lake, Cal.

SUPERFLUOUS hair removed in 20 minutes, without injury to the skin, by Poudre-Dissolvant, \$1.00 per bottle; put up by Anti-Freckle Lotion Co., Springfield, Ohio.

STAMPING PATTERNS. ILLUSTRATIONS OF OUTFITS AND 6 PERFORATED PATTERNS 10 cts. 16 PATTERNS 25 cts. Mention paper. KATES & SON, GREENVILLE, Ohio.

SPOTTED CALLA. A FINE, blooming-sized bulb, also copy of Park's Floral Guide for 1891, all for 15 cents. Order at once. This notice will not appear again. G. W. PARK, Libonia, Penn.

TOKOLOGY. A Complete Ladies' Guide in Health and Disease. Lizzie N. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of TOKOLOGY. I have a strong, healthy baby, who has never been sick a minute." Bought from agents or direct of us. \$2.75. Sample pages for ALICE B. STOCKHAM & CO., 161 La Salle St., CHICAGO, Ill.



OUR IMPROVED NOVELTY RUG MACHINE uses two needles, coarse and fine. Machine sent by mail for \$1.10. Terms to agents with price lists of machines, rug patterns, etc., free. To anyone who will act as our agent we will send one Machine and a nice Ottoman pattern with yarn to fill it, with full printed directions and a pattern Book, all by mail, for \$1.50. Address, E. BOSS & CO., TOLEDO, OHIO. State where you saw this advertisement.



LINEN TABLE SQUARE.

this: In changing things around last fall, getting her house ready for winter, she purchased new lace curtains for her sitting-room, and took the old sitting-room curtains for a smaller room with lower ceiling. She didn't need such long curtains. Instead of cutting them off, as I would have done, to get the desired length, she hemmed them up a half a

Our Household.

HOW TO COOK CRANBERRIES.

RECIPES adopted by the American Cranberry Growers' Association.

1. Wash them clean and remove all stems and leaves.

2. Always cook in a porcelain-lined kettle or stewpan. Never cook in tin or brass.

3. The sooner they are eaten after cooking the sooner you will know how good they are.

SAUCE No. 1.—One quart of berries, one pint of water, one pound of granulated sugar. Boil ten minutes; shake the vessel, do not stir. This means a full, heaped, dry-measure quart, which should weigh full seventeen ounces.

SAUCE No. 2.—One quart of berries, one pint of water, one pound of granulated sugar. Bring sugar and water to boil, add the fruit and boil till clear (fifteen or twenty minutes.)

SAUCE No. 3.—One pound of berries, one scant pint of cold water, one half pound of granulated sugar. Boil together berries and water, ten minutes; add sugar and boil five minutes longer.

STRAINED SAUCE.—One and a half pounds of berries, one pint of water, three fourths of a pound of sugar. Boil together berries and water ten to twelve minutes; strain through a colander and add sugar.



SPOTTED CALLA LILY.

CRANBERRY JELLY.—One and a half pounds of berries, one pint of water. Boil fifteen minutes; strain through a jelly-bag or coarse cloth; cook the juice fifteen minutes; add as much sugar as you have juice and boil again fifteen minutes; and turn into forms or jelly-cups; dip forms into cold water to prevent sticking.

CRANBERRY TARTS.—Either of the sauces above will make delicious tarts. Strained sauce is generally preferred.

CRANBERRY PIES.—For pies with upper crusts the berries should be used whole and cooked in the pastry in the following proportion: Four parts berries, three parts sugar, one part water.

STEAMED BATTER PUDDING.—Stir the cranberries with a light batter; steam two hours; serve with liquid sauce.

STEAMED CRANBERRY DUMPLINGS.—Use cranberries the same as apples; steam about one hour and serve with sauce.

FROZEN CRANBERRIES.—Some prefer the flavor of frozen cranberries. Freeze them solid and throw into hot water; use one fourth less sugar than in former recipes.

BONBONS FOR THE WHITE HOUSE.

The Buffalo Courier has mentioned the sensation made in London by the skill in window decoration of Miss Virginia Pope, of Buffalo, daughter of Capt. F. L. R. Popo and niece of Charles Pope, United States Consul at Toronto. She is now employed by Louis Sherry, a New York confectioner, and in a recent letter she de-

scribed a purchase made by Mrs. Stanford, wife of United States Senator Leland Stanford, of California, as a New Year's gift for Mrs. Harrison. Mrs. Stanford visited the store in company with Mrs. Grant, widow of the general. After selecting favors for a dinner to be given January 15, she purchased, at a cost of \$150, a box made of pearl satin, 20 by 21 inches and 17 inches high. Drooping over the beautifully painted design on the top were ostrich feathers of the natural size embroidered in chenille, and an exquisite knotted fringe and tassels went around the sides. The lining was of quilted satin. The box contained ten pounds of bonbons, the arrangement of which was designed by Miss Pope. Pink and white bonbons formed the stripes of an American shield, in the center of which was a star of fruit. The lower part of the shield was formed of violets, among which were scattered white stars. The whole was tied in with white lace papers and ribbon, crossed above with two American silk flags, underneath which was placed Mrs. Stanford's card.

ABOUT THE SPOTTED CALLA.

EDITOR FARM AND FIRESIDE:—Last spring I sent off and got a bulb of the spotted calla lily. I had it but a little over two months till it bloomed. All my lady friends were anxious to get a lily like it, so I let it go to seed. The seeds did not get ripe, and the plant looked as though it would die, so I took them off. Now it has all died down, but the bulb seems to be perfectly healthy. I have kept it in dry dirt ever since the tops died. Please tell me what to do for it. I do not want to lose it.—A CONSTANT READER.

ANSWER:—The spotted calla (Richardia maculata alba) is a summer blooming plant, and requires a period of rest during winter, just as the gladiolus or the hyacinth. It is hardy in the south, but must be taken up and wintered in a frost-proof cellar or pit in the north. Our inquirer should keep the tuber till spring, then pot it or plant it out. Its renewed growth will be more vigorous than ever. The fruit of this plant does not change its color, as does that of the Indian turnip, which it much resembles, but remains of a green color when the seeds are ripe. Had our inquirer cut the cluster with the stem and hung it up till dry, then examined the seeds, they would have been found plump and well matured. The engraving represents the spotted foliage and a flower of this calla.

GEORGE W. PARK.

CANNING PUMPKIN.

If ever so good care has been taken of the pumpkins, they cannot be expected to keep much longer; and when pie timber is as scarce as it is this year, one feels as if everything in that line ought to be saved that can. We tried canning as well as drying and there seemed to be no show of any failure to keep in the glass cans. The pumpkin was cooked a long time, until it was quite thick, and when put into the cans great care was used to shake and press it down so firmly that no bubbles or air spaces could be seen. It takes quite a little while to fill a can when one is so particular, but it will pay to have patience. Pumpkin settles and seems to shrink when cold, and if you are not careful, the can will not then be full and there is danger of the contents spoiling.

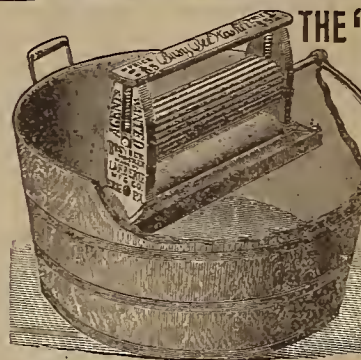
GYPSY.

MONEY

can be earned at our NEW line of work, rapidly and honorably, by those of either sex, young or old, in their own localities, wherever they live. Any one can do the work. Easy to learn. We furnish everything. We start you. No risk. You can devote your spare moments, or all your time to the work. This is an entirely new lead, and brings wonderful success to every worker. Beginners are earning from \$25 to \$50 per week and upwards, and more after a little experience. We can furnish you the employment and teach you FREE. No space to explain here. Full information FREE. TRUE & CO., AUGUSTA, MAINE.

NATURE'S SPECIFIC The Wonderful Kola Plant, FOR THE CURE OF ASTHMA FREE ON TRIAL.

Discovered by African Explorers on the banks of the Congo river, West Africa, is a certain and unfailing cure for Every Form of ASTHMA. A Positive Cure Guaranteed, or if you desire it, NO PAY UNTIL CURED. Office for Export and Wholesale Trade, 1164 Broadway, New York. For Descriptive Book and Trial Case of The KOLA Plant Compound, (HIMALAYA), FREE by Mail, address Central Office, KOLA IMPORTING COMPANY, 132 VINE STREET, CINCINNATI, OHIO. See New York World, May 18, 1890; Philadelphia Press, May 19; Christian Observer and Medical Journal, April 9; etc., for full accounts of this wonderful botanical discovery. The Christian Evangelist, May 30, 1890, says editorially: "If no other result than the discovery of the Kola plant followed the explorations of Stanley and associates, surely their labors were not in vain. We have the most convincing proof that it is a certain and unfailing cure for Asthma in all its forms, and is the most valuable medical discovery of this century." Remember, NO PAY UNTIL CURED.



THE "BUSY BEE" WASHER

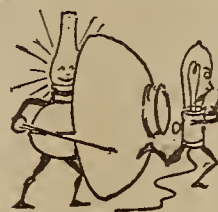
Guaranteed to run easier and do better work than any other in the world. No rubbing necessary. We challenge a trial with any other machine. Warranted for five years, and money refunded if not entirely satisfactory. Fits any tub. Saves time, money and clothes. Just the machine for ladies who are not very strong. Thousands of ladies who used to hire their washing done now save that expense by using the "BUSY BEE" WASHER. Save your strength, health, time, clothes and money by investing only \$2 in this machine. Don't keep the Washer unless it suits you. We are responsible and mean just what we say. We invite you to investigate thoroughly before risking a cent. We will forfeit \$100 to anyone who will prove that we ever refused to refund the full amount to a dissatisfied purchaser.

AGENTS WANTED In every country. Exclusive territory. Many of our agents make \$100 to \$200 a month. Lady agents are very successful. Farmers and their wives make \$200 to \$400 during winter. One farmer in Missouri sold 600. Price \$5. Sample (full size) to those desiring an agency, only \$2. Also celebrated PENN WRINGERS and other useful household articles at lowest wholesale price. We refer to our P.M., Mayor, Agt. Am. Ex. Co., or editor of this paper. Write for catalogue and terms to agents. LAKE ERIE MFG. CO., 177 East 13th St., ERIE, PA.



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afford the best and cheapest means of object teaching for Colleges, Schools and Sunday Schools. Our assortment of views, illustrating art, science, history, religion and travel, is immense. For Home Amusement and Parlor Entertainment, etc., nothing can be found as instructive or amusing, while Church Entertainments, Public Exhibitions and Popular Illustrated Lectures. An instrument with a choice selection of views makes a splendid Holiday present. We are the largest manufacturers and dealers, and ship to all parts of the world. If you wish to know how to order, how to conduct Parlor Entertainments for pleasure, or Public Exhibitions, etc., for MAKING MONEY, send us your name and address on a postal card (naming this paper), and we will mail you our 208 PAGE BOOK FREE. McALLISTER, Mfg. Optician, 49 Nassau St., N. Y. City.



Imagine a lamp with all perfectations—what will it be?

A light like the incandescent electric, but four or five times stronger.

Controllable. A thumbscrew turns it up or down, a hundredth part of an inch if you please.

Without suspicion of smell, like sunshine, and moonlight.

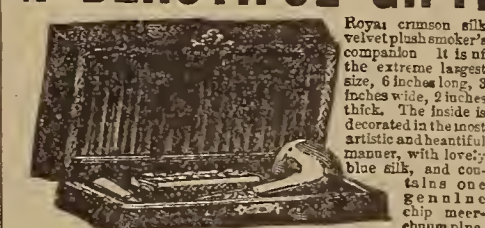
It burns all night without touching; and all the care it requires every day is filling and dusting; once a week the char rubbed off the top of the wick, and once in six months a new wick put in.

A common servant, or even a child, can take care of it.

That is the "Pittsburgh." Send for a primer.

Pittsburgh, Pa. PITTSBURGH BRASS CO.

A BEAUTIFUL GIFT.



Royal crimson silk velvet plush smoker's companion. It is of the extreme largest size, 6 inches long, 3 inches wide, 2 inches thick. The inside is decorated in the most artistic and beautiful manner, with lovely blue silk, and contains one genuine chip meerschaum pipe. The bowl of the pipe is made of the chips of the best genuine meerschaum. It is a magnificent pipe in every way. It has a patent stem and mouthpiece, silver plated, which can be taken apart to clean pipe, and is never sold by tobacco stores for less than two dollars. It also contains a cigar holder made of genuine meerschaum with genuine amber mouth piece, and is well worth half a dollar; and contains one solid German silver match box. The case on the outside is covered with genuine crimson silk velvet plush; such cases have been selling for as much as five dollars. To introduce our goods, for 30 days only, we will send you our royal crimson silk velvet plush smoker's companion for only 99c. Charges all prepaid and satisfaction guaranteed or money refunded. This offer is made only to those who will endeavor to introduce our goods, otherwise we charge \$3.00. Address WM. WILLIAMS, 125 Halstead St., Chicago, Ill.

LOOK 40,000 READ MUST BE SOLD!

Lot No. 3. Gents' Solid Gold Waltham, full jeweled, full engraved, stem wind. Only \$21.25
Lot No. 5. Gents' Solid Gold Filled Watch, full engraved, open face or hunting, stem wind, stem set, full jeweled, Waltham. \$13.95
Lot No. 7. Ladies' Solid Gold Watch, double cases, full engraved, stem wind, ruby jewels, etc. A daisy. Only \$18.50
Lot No. 8. 3-oz. Dueber Stem Wind, fitted with full ruby jewels, nickel works, open face. \$4.95
Lot No. 9. Silver Nickel Stem Wind, stem set, open face. \$2.25
Lot No. 10. Nickel Silver Watch, key wind, open face. \$1.85
Don't buy worthless brass goods from other houses when you can buy solid gold goods from us at less than half price. Every Watch is guaranteed. The Gold Watches are guaranteed for 25 years. Don't send any money until you see these goods, which will be shipped C. O. D. You can test them and examine at Express Office, and if they suit you, pay the Express Company, otherwise you pay nothing. If you are far from Express Office, send money with order, and we will ship free of charge.

THE CHICAGO WATCH CO.
142 Dearborn Street,
Capital Stock, \$130,000. CHICAGO.



The EVERETT PIANO.

UNEXCELLED IN ANY QUALITY REQUISITE IN A FIRST CLASS PIANO.

If not for sale by your local dealer, address

The JOHN CHURCH CO., - CINCINNATI, O.

"From Andante to Allegro," a beautifully illustrated pamphlet, will be sent free to any one who will mention where this advertisement was seen.

YOU ARE HONEST.

We want reliable women in every town to sell \$6.00 worth of Teas, Spices, and Baking Powders for us, and get a set of Silver Knives and Forks free, or \$12.00 worth, and get a set of China Dishes free. No money required until you deliver goods and get premium. W. W. THOMAS, 37 Pike St., Cincinnati, O.

14K GOLD! AND SOLID GERMAN SILVER.

The cases are made of a plate of the fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold covering finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth finish, finished to dazzling brightness, dust and damp proof, and are warranted to wear a life time. Different from the cheap brass watches offered, the case contains nothing but gold and the finest quality of German silver, and in fact is a every way except intrinsic value, equal to a \$50 solid gold watch. The movement is a fine 3-plate style, finely jeweled polished pinion, oil tempered male spring which does not break, and all the latest improvements. A guarantee is sent with each watch that it will keep accurate time for 2 years ordinary use. OUR 90 DAY OFFER. That all may have this beautiful watch in their own hands, and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the express agent \$2.25, or when full amount is sent with order we give a fine gold plated chain and fob free. If not satisfactory you can refuse same and you are nothing out but your travel going to the express office. Knowing the fine qualities of this piece we make the above offer, as anyone wanting a good time piece will accept same at once on examination. Order at once as one price will be advanced. Address WILLIAMS & CO., 125 S. Halstead St., Chicago, Illinois. Mention Farm and Fireside when you write.

See the Free Books offered subscribers, on page 175.

Our Sunday Afternoon.

THE DAY'S DEMAND.

God, give us men! A time like this demands Strong minds, great hearts, true faith and ready hands;
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking;
Tall men, sun crowned, who live above the fog
In public duty and in private thinking.
For while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds,
Mingle in selfish strife, lo! freedom weeps
Wrong rules the land, and waiting justice sleeps.
—Dr. J. G. Holland.

PREACHING AGAINST FORTUNE-TELLERS.

THE Rev. Father Wall, rector of St. Paul's cathedral, scored the people of his parish the other day, particularly the married women, on the practice of patronizing fortune-tellers and wizzards who read the past, present and future.

"When a person visits a fortune-teller to ascertain his fortune, he goes to find out what God alone, and no one else, knows. When you give to a fortune-teller your presence, and make him or her believe that they have a foreknowledge of seeing the inside view of the future, you adore him and make him believe he has power not given to the devil. If you think he can peer into the future, you make him the equal of God. Therefore, you have strange gods before Him, and violate the first commandment.

"We find youths, young girls, and especially married women, making a practice of this sin. If you deliberately visit a fortune-teller you are indulging in a mortal sin. If you go out of pure thoughtlessness, it is not so bad; but it is a sin, nevertheless. It is the same thing as going to an idol and giving your heart to it. This is idolatry of the worst kind. I would like to impress on your minds that fortune-tellers compose the worst characters in the community. One class of the business is fortune-telling and the other is the seduction and ruin of youth. To my own personal knowledge I know of persons who have been ruined by consulting these people. I warn all persons of the congregation, and hope you will extend this knowledge, that it is a mortal sin against the first commandment. Avoid them and their nefarious business for the designs they have on the morality of youth."—Pittsburgh Dispatch.

LEARN TO FORGIVE.

Learn how to forgive. Do not carry an unforgiving spirit with you through all your life; it will hurt you more than anything else. It will destroy the happiness of many around you, yet its chief feeding ground will be found in your own heart. You hate your neighbor. Youder is his dwelling, one hundred and fifty yards away. Suppose you pass by a wood fire, and as you pass you pluck a half-consumed brand from it, flaming and gleaming, and, thrusting it under your garment to hide it, you start for your neighbor's dwelling to burn it. Who gets the worst of it? You find your garments on fire and your own flesh burned before you can harm your neighbor. So is he who carries an unforgiving spirit in his bosom. It stings his own soul like an adder shut up there. I know of some who call themselves Christians, who are miserable because of their own revengefulness. Forgive your enemies, and get down on your knees and pray for them, and salvation will come into your own soul like a flood. "Father forgive them." Sweet prayer and blessed example.—Rev. R. V. Lawrence.

Deserving Confidence.—There is no article which so richly deserves the entire confidence of the community as BROWN'S BRONCHIAL TROCHES. Those suffering from Asthmatic and Bronchial Diseases, Coughs and Colds should try them. They are universally considered superior to all other articles used for similar purposes. The late Rev. Henry Ward Beecher said of them: "I have never changed my mind respecting them from the first, except I think yet better of that which I began by thinking well of. I have also commended them to friends, and they have proved extremely serviceable."

TRUE WISDOM.

There is nothing in this world more desirable than true wisdom, and few things that are more uncommon. Its scarcity might lead to the conclusion that it is something only a favored few can obtain; but this is only the result of man's inexcusable neglect. The source of all wisdom is not an earthly one; and from this source no one is excluded, though he may not be able to attend any high institution of learning. The apostle James writes: "If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not, and it shall be given him." The wisdom which God gives is genuine and superior to worldly wisdom. "The foolishness of God is wiser than men." 1 Cor. 1: 25. It is a wisdom that will make itself apparent; for "the wisdom that is from above is first pure, then peaceable, gentle, and easy to be entreated, full of mercy and good fruit, without partiality, and without hypocrisy." Jas. 3: 17. This is the most valuable of all kinds of wisdom, and it is denied to none.—Advent Review.

COURAGE IN LIFE.

Life is not entirely made up of great evils or heavy trials, but the perpetual recurrence of petty evils and small trials in the ordinary and appointed exercise of the Christian graces. To bear with the failings of those about us—with their infirmities, their bad judgment, their ill-breeding, their perverse tempers; to endure neglect when we feel we deserved attention, and ingratitude when we expected thanks; to bear with the company of disagreeable people whom Providence has placed in our way, and whom he has perhaps provided or purposed for the trial of our virtue—these are best exercises of patience and self-denial, and the better because not chosen by ourselves. This habitual acquiescence appears to be more of the essence of self-denial than any little rigors of our own imposing. These constant, inevitable, but inferior evils, properly improved, furnish a good moral discipline, and might, in the days of ignorance, have superseded penance.—Hannah More.

SUGGESTIONS FOR YOUNG MEN.

Nothing begets confidence in a young man sooner than a habit of punctuality, sobriety and accuracy.

Money possesses a magnetic power; it stirs the world from its center to its circumference; it shapes the destinies of nations as well as those of individuals.

Those who generally succeed make themselves merchants or business men by their unceasing application and toil; whatsoever their hands find to do they do it with all their might.

Establish a reputation for uprightness, promptness and fair dealing and you are on the road to success; let all your transactions be based on integrity; make your word as good as your bond.

Success is an object most universally desired, and can only be obtained by the exercise of good judgment, well-directed energy combined with good habits, industry, economy and perseverance.

LOVE IN THE HOME LIFE.

We ought not to fear to speak our love at home. We should get all the tenderness possible into the daily household life. We should make the morning good-bys, as we part at the breakfast-table, kindly enough for final farewells. Many go out in the morning who never come home at night; therefore we should part, even for a few hours, with kind words, with a lingering pressure of the hand, lest we may never look again into each other's eyes. Tenderness in the home is not a childish weakness; it is one that should be indulged in and cultivated, for it will bring the sweetest returns.

CORRECT.

A Congo native who has been taught to read and write, has just sent a letter, his first, to the Archbishop of Canterbury. It is as follows: "Great and Good Chief of the tribe of Christ, greeting: The humblest of your servants kisses the hem of your garment, and begs you to send to his fellow-servants more Gospel and less rum. In the bonds of Christ, Ugalla." That letter hits the nail pretty effectually on the head, doesn't it?



Look Here, Friend. Are you Sick?

Do you have pains about the chest and sides, and sometimes in the back? Do you feel dull and sleepy? Does your mouth have a bad taste, especially in the morning? Is there a sort of sticky slime collects about the teeth? Is your appetite poor? Is there a feeling like a heavy load on the stomach, sometimes a faint, pit of the stomach, which food does not satisfy? Are your eyes sunken? Do your hands and feet become cold and feel clammy? Have you a dry cough? Do you expectorate greenish colored matter? Are you hawking or spitting all or part of the time? Do you feel tired all the while? Are you nervous, irritable and gloomy? Do you have evil forebodings? Is there a giddiness, a sort of whirling sensation in the head when rising up suddenly? Do your bowels become constive? Is your skin dry and hot at times? Is your blood thick and stagnant? Are the whites of your eyes tinged with yellow? Is your urine scanty and high colored? Does it deposit a sediment after standing? Do you frequently spit up your food, sometimes with a sour taste and sometimes with a sweet? Is this frequently attended with a palpitation of the heart? Has your vision become impaired? Are there spots before the eyes? Is there a feeling of great prostration and weakness? If you suffer from any of these symptoms I will gladly send you by return mail a sample bottle of the best remedy on earth for the speedy and permanent cure of the above-named complaints. This will enable you to test my medicine free of all cost. No other medicine manufacturer can afford to do this. I know my remedy will cure you no matter how badly you suffer. Write to-day, stating your disease. A trial costs you nothing. Address Prof. HART, 80 Warren Street, New York.

500 Crystal Glass Water Sets Free

Splendid Premium Offers—Look for Water.

WE are the publishers of a very popular 20 page, 80 column illustrated home paper. In order to introduce it into new homes we make you this Grand Offer. The person telling us the place in the Bible where the word Water is first found (Book, chapter and verse) before May 15th, will receive a handsome Parlor Organ, valued at \$125.00. Should there be more than one correct answer, each of the next five persons will receive a beautiful Parlor Organ, valued at \$100.00. The next five persons will each receive a beautiful 56-Piece Tea Set. The next ten persons will each receive a splendid Family Sewing Machine, valued at \$65.00 each. The next ten persons will each receive a handsome, 14 k. gold plated, hunting case Watch, stem wind and set, ladies' or gent's size. The next five hundred persons will each receive one of our beautiful Crystal Glass Water Sets. The next ten persons will each receive a handsome Dress Pattern of Silk, valued at \$25.00. With your answer enclose 25 cents (silver if you can, or stamps) for which we will send you our warming paper each month for five months. We make this Grand Offer simply to advertise our paper and secure new subscribers, that's the reason we give away these grand premiums, because we want new subscribers. Remember, you pay nothing for the premiums. The 25 cents is to pay for the paper five months. The premiums we give away to advertise our business. We guarantee satisfaction or money refunded. The list of persons receiving the beautiful premiums will be published in the June Number of our paper. When you write say you saw our advertisement in this paper, and don't fail to enclose 25 cents for our paper five months. Address Kirtland Bros. & Co., P. O. Box 3340, N. Y.

FREE FOR 20 DAYS from date of this paper. **GRAYON PORTRAITS** and at the same time this special offer. Send us a picture of yourself or any member of your family, living or dead, and we will make you a LIFE SIZE GRAYON PORTRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our work, and use your influence in securing us future orders. Place name and address on back of picture and it will be returned in perfect order. We make any change in picture you wish, not interfering with the likeness. Refer to any Bank in New York. Address all mail to PACIFIC PORTRAIT HOUSE, Broadway Theatre Bldg, New York.

PATENTS THOMAS P. SIMPSON, Washington, D. C. No atty's fee until Patent obtained. Write for Inventor's Guide.

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WRITE NEW RAPID College of SHORTHAND BUFFALO, N. Y. SHORTHAND learned at HOME free, only one student in a town given this privilege. Send stamp for full instructions. Students assisted to positions.

VIRGINIA FARMS FREE CATALOGUE R. B. CHAFFIN & CO. RICHMOND, VA.

FLORIDA.

Send address, on postal card, for any information wanted about LANDS, HOTELS, ROUTES, etc., etc. Answered promptly.

L. Y. JENNESS, SANFORD, FLORIDA. Be sure to mention this paper when you write.

Petrified Wood Send 15 cents in stamps, silver or postal note to Moritz Reich, Garland, Custer Co., Montana, and you will receive a fine specimen of petrified wood, postage prepaid.

BICYCLES ON EASY PAYMENTS. All makes new or 21 hand. Lowest prices guaranteed. Send for cats and save money. Rouse, Hazard & Co., 32 E. St. Feoria, Ill.

BEES AND HONEY.

Send to the Largest Bee-Hive Factory in the world for sample copy of **CLEANINGS IN BEE CULTURE** (a 11 illus'd semi-monthly), and a 44 pp illus. Catalogue of **BEE KEEPERS' SUPPLIES**. Our ABC of Bee Culture is a cyclopedia of 400 pp. and 300 cuts. Price \$1.25. Mention this paper. A. I. ROOT, Medina, O.

Winchester's Hypophosphite

OF LIME AND SODA. is a nourishing Chemical Food for the Brain, Nervous System and Blood. A Perfect Tonic and Invigorator. For Weak Lungs, Coughs and General Debility, it is an unequalled remedy.

SOLD BY DRUGGISTS. WINCHESTER & CO. Chemists 162 William St., N. Y.

THE GREAT CHINA TEA CO. Give away as Premiums White Tea Sets, 56 and 70 pieces, with \$10 and \$11 orders. Decorated Tea Sets, 44 and 56 pieces, with \$11 and \$13 orders. Moss Rose Tea Sets, 44 and 56 pieces, with \$18 & \$20 orders. White Imported Dinner Sets, 118 pieces, with \$20 orders. Decorated Imported Dinner sets, 112 pieces, with \$20 orders. Decorated Imported Toilet Sets, 10 pieces, with \$10 orders. Moss Rose Imported Toilet Sets, 10 pieces, with \$15 orders. Hanging Lamp with Decorated Shade, with \$10 orders. Stem Winding Swiss Watch, Ladies' or Boys' with \$10 orders. The same Premiums allowed on Coffee as Tea. Send your address for our 64 page Illustrated Catalogue, containing complete Premium and Price List.—Mention this paper.

Address **THE GREAT CHINA TEA CO.,** 210 STATE STREET, BOSTON, MASS.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Down With High Prices. THIS SEWING MACHINE **ONLY \$10!**

Top Buggies, \$55.00. Harness \$7.50. Road Carts, \$10.00. Wagons, \$30.00. \$5.00 Family or Store Scale, 1.00. A 240-lb. Farmers' Scale, 3.00. 4000 lb. Hay or Stock Scale, 40.00. Forge and Kit of Tools, 20.00. 1000 other Articles at Half Price. CHICAGO SCALE CO., Chicago, Ill.

FOR YOU

Mr. PARMELEE sold in three days, 116 Copper Coins for \$6.95; 29 Silver Coins for \$4.73; 1 Gold Coin for \$1.76. And we can prove that others have done nearly as well.

Coin Collecting Pays Big If you have any Old Coins or Proofs coined before 1878, save them, as they might be worth a fortune. Illustrated circulars on rare coins free at office or mailed for two stamps. **AGENTS WANTED.**

Numismatic Bank, Court Street, Boston, Mass.

A Family Knitting Machine for Only \$5.00.

Patented April 1, 1890. Will knit a pair of stockings, complete with heel and toe. Will knit mitts, scarfs, leggings, fancy work, and all articles for the household. A little girl 12 years old can do all the knitting. Just the machine every family has long wished for. Will save ten times its cost. To introduce this machine and secure agents at once; if you will send me \$2.00, postal note or currency, I will ship the machine by express C. O. D. You can pay the balance \$3.00 on receipt of machine and return it to your agent and allow you a large commission. You can clear \$200 a month. Don't miss this unparalleled offer, as a practical knitting machine has never before been sold at this low price. Address J. E. GEARHART, Clearfield, Pa.

NO MONEY Required Until After FULL EXAMINATION. 14K GOLD AND SOLID GERMAN SILVER.

The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but fine gold covering the finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth basins, finished to a dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, the case contains nothing but gold and the finest quality of German silver and in fact it is in every way, except intrinsic value, equal to a \$50 solid gold watch. The movement is a fine 2-4 plate, finely jeweled polished pinion, all tempered main spring which does not break, and all the latest improvements. A guarantee is sent with each watch that will keep accurate time for 2 years ordinary use. **OUR 90 DAY OFFER.**

That all may have this beautiful watch in their own hands and fully examine and see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the expressage \$2.75 or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowing the fine quality of this watch we make the above offer, as any one wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address **WILLIAMS & CO.,** 125 S. Halsted St., Chicago, Illinois. Mention Farm and Fireside when you write.

Guaranteed Watch \$2.75.

Gleanings.

THE SMALLEST CIRCULATION.

NEWSPAPERS are always vaunting themselves as having the "largest circulation" in the world, writes a London correspondent in the *Critic*.

Here is a new idea for them: The Austrian emperor's morning paper, which his imperial majesty consults daily, and consults over occasionally, has the smallest circulation in the world. In fact, its circulation is limited to the august Francis Joseph himself. This *Chronicle*—I believe that is the name—is the most curious publication imaginable. Its proprietor is the emperor, it is published for the emperor, and, so far as I can learn, it is only read by the emperor. It is, at any rate, issued for his sole benefit, and the imperial news bureau brings it out at a cost of two hundred thousand gulden yearly. It contains, in a condensed form, all the articles in foreign papers which refer to Austria. Surely, this is true wisdom—I mean this desire of becoming acquainted with all that is publicly said or written about one's self, when that self is set in high place. Many a word which no courtier or subject would venture to speak direct, may thus find its way to the imperial ear.

HOME HAPPINESS.

Probably nineteen twentieths of the happiness you will ever have you will get at home. The independence that comes to a man when his work is over and he feels that he has run out of the storm into the quiet harbor of home, where he can rest in peace and with his family, is something real. It does not make much difference whether you own your house or have one little room in that house, you can make that one little room a true home to you. You can people it with such moods, you can turn to it with such sweet fancies that it will be fairly luminous with their presence, and it will be to you the very perfection of a home. Against this home none of you should ever transgress. You should always treat each other with courtesy. It is often not so difficult to love a person as it is to be courteous to him. Courtesy is of more value and more royal grace than some people seem to think. If you will be but courteous to each other you will soon learn to love more wisely, profoundly, not to say lastingly, than you ever did before.

CULTIVATING DISEASE.

The internal organs do not want to be thought about. A man's stomach is healthy when he does not know he has one. When we are conscious of the existence of any internal organ, that organ is sick. The internal machinery was intended to do its work unconsciously. When we begin to think about our stomachs, digestion is arrested. John Hunter said he got gout by thinking about his great toe. A man who sits at the table wondering if baked potatoes will agree with him, and whether fruits and vegetables are a good combination, is in a fair way to have trouble with the simplest kind of food. Thinking about the internal organs gets them in a sort of stage fright and they are powerless.—*Good Health*.

KEEPING FLOWERS.

A new method of preserving natural flowers has been discovered by an English lady, whose process is well worth considering. The flower buds were cut just as they were about to open and the ends of the stems covered with sealing wax. Each was then wrapped separately in paper and laid away in a box. When they were wanted she clipped the stems just above the wax and immersed them in water, to which a little nitre had been added; and though the flowers had been gathered nearly a month before, on the morrow they opened with as much beauty and fragrance as if freshly plucked.

CURE FOR PNEUMONIA.

Take ten or twelve raw onions, chop fine and put in a large spider over a hot fire; then add about the same quantity of rye meal and vinegar enough to make a thick paste; let it simmer five or ten minutes. In the meanwhile stir it thoroughly, then put it in a cotton bag large enough to cover the lungs; apply to the chest as hot as the patient can bear; when this gets

cool apply another; and thus continue by reheating the poultices, and in a few hours the patient will be out of danger. This recipe was given me several years ago by an old physician, who stated that it had never failed in a single instance to effect a cure of this too often fatal malady.

NOT SQUARE.

The Teuton is often a long time in learning American idioms. One who had been here for a year or more, and who could speak some English before his arrival, a very short and corpulent man, by the way, went to his grocer's and paid a bill which had been standing for several weeks.

"Now you are all square, Hans."

"I vas vat?"

"You are square, I said."

"I vas square?"

"Yes—you are all square now."

Hans was silent for a moment; then, with reddening face and flashing eyes, he brought his plump fist down upon the counter and said:

"See here, mine frent, I vil haf no more peeze mit you. I treat you like a shentleman; I pay my pill, und you make a shoke of me—you say I vas square, ven I know I vas round as a parrel. I dond like sush shokes. My peeze mit you vas done!"

Recent Publications.

CATALOGUES RECEIVED.

Circular describing the Mapes Tobacco Manure, from the Mapes Formula and Peruvian Guano Co., New York.

Farm Annual. H. G. Faust & Co., Philadelphia, Pa.

Catalogue of Northern Grown Plants, Bulbs and Seeds. L. L. May & Co., St. Paul, Minn.

Catalogue of Seeds, Plants, etc. The Storrs & Harrison Co., Painesville, Ohio.

Price List of Call's Nurseries. S. W. Call, Perry, Lake Co., Ohio.

Burpee's Farm Annual. W. Atlee Burpee & Co., Philadelphia, Pa.

Catalogue of Small Fruit Plants. J. M. Edwards & Son, Ft. Atchison, Wis.

Catalogue of Steam Engines and Steel Boilers, both horizontal and vertical. James Leffel & Co., Springfield, Ohio.

Catalogue of Seeds for sale by Trumbull, Strean & Allen Seed Co., Kansas City, Mo.

Special circular of New Irrigating Pumps, Horse Powers and Appliances. The Goulds Mfg. Co., Seneca Falls, N. Y.

Catalogue of Champion Hay Presses. Famous Mfg. Co., Chicago, Ills.

Autumn Bulb Catalogue of Peter Henderson & Co., New York.

Catalogue of Northern Grown Tested Seeds. Northrup, Braslan & Goodwin Co., Minneapolis, Minn.

Vegetable, Flower and Field Seeds. Frank Ford & Son, Ravenna, Ohio.

Descriptive catalogue of Seeds. Jas. M. Thorburn & Co., 15 John St., New York.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

CANADA.—(Agricultural College, Guelph.) Bulletin No. 55, December 2, 1890. Experiments in swine feeding with grain and meal.

Bulletin No. 56, December 9, 1890. Smut, its habits and remedies. Bulletin No. 57, December 16, 1890. Sugar beets.

CANADA.—(Central Experiment Farm, Ottawa.) Dairy Bulletins. (No. 1) Milk for cheese factories. (No. 2) Notes for cheese makers for May. (No. 3) Butter making. (No. 4) Fodder-corn and the silo.

FLORIDA.—(Lake City.) Bulletin No. 11, October, 1890. Experiments in corn and Irish potatoes and analysis of grasses.

NEW YORK.—(Cornell Station, Ithaca.) Bulletin No. 23, December, 1890. Insects injurious to fruits.

OHIO.—(Columbus.) Bulletin No. 9, Vol. III. Seed-bearing and non seed-bearing asparagus. The use of rubber bands in bunching asparagus. Transplanting onions.

TENNESSEE.—(Knoxville.) Bulletin No. 51, Vol. III. Fruit trees at the experiment station.

WEST VIRGINIA.—(Morgantown.) Bulletin No. 8, June, 1890. Summary of meteorological observations and reports of correspondents on conditions of agriculture, etc. Bulletin No. 9, July, 1890. Additional report upon wheat distribution in 1890. Meteorological report for July. August, 1890. Meteorological report for August. Reports of crop correspondents for August.

ILLINOIS.—(Champaign.) Bulletin No. 12, November, 1890. Field experiments with oats, 1890. Third annual report, 1889-90.

KANSAS.—(Manhattan.) Bulletin No. 14, December, 1890. Winter protection of peach trees and notes on grapes.

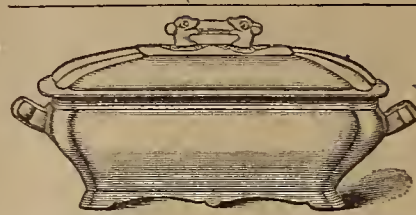
MAINE.—(Orono.) Annual report for 1890. Part I.

NEW HAMPSHIRE.—(Hanover.) Bulletin No. 11, November, 1890. Pig-feeding experiments. Including results of feeding skim-milk and corn meal against corn meal and middlings, and digestive experiments.

NEW JERSEY.—(New Brunswick.) Bulletin No. 76, November 28, 1890. Some fungus diseases of the sweet potato. Bulletin No. 77, December 11, 1890. Experiments with different breeds of dairy cows.

Catarrh Cured.

If you suffer from Catarrh, in any of its forms, it is your duty to yourself and family to obtain the means of a certain cure before it is too late. This you can easily do by sending a self-addressed stamped envelope to Prof. J. A. Lawrence, New York, who will send you FREE, by return mail, a copy of the original recipe for preparing the best and surest remedy ever discovered for the cure of Catarrh in all its various stages. Over one million cases of this dreadful, disgusting, and often-times fatal disease have been cured permanently during the past five years by the use of this medicine. Write to-day for this FREE recipe. Its timely use may save you from the death toils of Consumption. Do not delay longer, if you desire a speedy and permanent cure. Address Prof. J. A. LAWRENCE, SS Warren Street, New York.



Dinner Set, No. 131, 118 Pieces.
ENGLISH PORCELAIN STONE CHINA.
Packed and delivered at depot for \$3 cash.

OR we give this Set as a Premium to those who get up a Club of \$20.00 for our Teas Spices and Extracts. We are Importers of Tea, Coffee and Crockery, and sell direct to Consumers. We want YOU to send for our 120-page Price and Premium List. It tells the whole story. Costs you nothing. Will interest and pay you.

THE LONDON TEA COMPANY,
795 Washington Street, Boston.

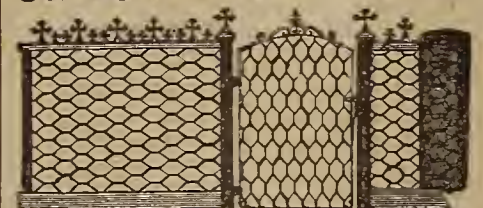
SEEDS GIVEN AWAY!
Send 10 cents for 3 months trial of Park's Floral Magazine, a charming monthly, and we will send you as a free gift 1 package Mixed Flower Seeds, nearly 1,000 kinds, yielding an astonishing variety of flowers, all sizes, forms and colors, value..... 15 cts.
1 package New Shirley Poppy or French Giant Pansy, value..... 10 cts.
1 Conditional Certificate or Order for seeds, your choice, value..... 25 cts.
1 Copy Park's Floral Guide, enlarged, new and instructive, value..... 10 cts.
All of these with MAGAZINE for only 10 cts. The MAGAZINE is "bright as a Marigold, and a welcome guest to every flower lover." You'll be delighted. Send 10 cents at once, and tell your friends to send. Don't wait. This advertisement will not appear again. Mention this paper. GEO. W. PARK, Seedsmen and Florist, Libonia, Pa.
P. S.—Park's New Rose Budget, all about Roses, superbly illustrated, only 10 cts. 16 splendid Roses, \$1.00.

MORGAN formerly called by us "TRIUMPH"
Angle of Teeth Adjustable to work at desired depth.
LATEST AND GREATEST PULVERIZER IN THE WORLD.
Will do work no other can.
SPADING HARROW
For SUMMER FALLOW, FALL SEEDING AND STUBBLE GROUND.
Style A has two gangs. Style B has four gangs. Leaves No Furrows or Ridges.
AGENTS WANTED.
For circulars and testimonials, write D. S. MORGAN & CO., Brockport, N.Y. Mention this paper.

Barnes' Foot Power Machinery.
WORKERS OF WOOD OR METAL, without steam power, using outfits of these Machines, can bid lower and save more money from their jobs, than by any other means for doing their work. Also for Industrial Schools or Home Training. With them boys can acquire journeymen's trades before they "go for themselves." Price List Free. W. F. & JOHN BARNES CO., No. 910 Baby St., Rockford, Ill.
Mention this paper when you write.

5 Horse Power Engine and Steel Boiler, \$185.
SAW MILL ENGINE AND BOILER, \$450.00.
ENGINES AND BOILERS
From 2 to 500 H. P.
For circulars address
ARMSTRONG BROS., Springfield, Ohio.
Mention this paper when you write.

SEDGWICK FARM FENCE PRICES REDUCED



Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or write THE SEDGWICK BROS. CO., RICHMOND, IND.
Don't fail to mention this paper.

WELL DRILLING MACHINERY,
MANUFACTURED BY
WILLIAMS BROTHERS,
ITHACA, N. Y.,
Successors to the Empire Well Auger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.
Send for Catalogue.
ADDRESS Williams Brothers ITHACA, N. Y.
Mention this paper when you write.

THOMPSON'S GRASS SEEDER
Sows CLOVER, TIMOTHY, RED TOP, and all kinds of GRASS SEEDS.
Sows any quantity—recently, accurately—in wet, dry, and windy weather.
20 to 40 Acres per day.
Weight 40 lbs.
O. E. THOMPSON & SONS, Send for circulars.
No. 12 River Street, YPSILANTI, MICH.

PROFITS FOR FARMERS.
A storm is coming. Buy Oborn's Hay Carriers and save your hay. Thousands in use. We make the latest and best improved Hay Tools. Save time. Save money by sending for CATALOGUE. Box E, OBORN BROS., Marion, Ohio.
Agents Wanted.

FREE TO BOYS AND GIRLS UNDER 18 YEARS OF AGE.
The WESTERN PEARL CO. will give away 1000 or more first-class safety bicycles (boy's or girl's style) for advertising purposes. If you want one on very easy conditions, without one cent of money for it. Address, enclosing 2-cent stamp for particulars, WESTERN PEARL CO., 808 Dearborn Street, CHICAGO, ILL.
Mention this paper when you write.

THREE FOOT HOLE DUG IN TWO MINUTES.
The coming Digger. It will bore a hole where no other auger will work. It is the only Post Hole Digger that will empty the dirt itself by touching a spring. Get the agency for your county. Write quick. Address The Champion Shelf Mfg. Co., Springfield, Ohio.
Mention this paper when you write.

FARM SCALES 3 TON \$35
CATALOGUE FREE.
OSGOOD & THOMPSON
BINGHAMTON, N. Y.

SHERWOOD'S STEEL HARNESS 18,000 IN USE.
Syracuse, N. Y.
Unequalled for Orchard and Vineyard Plowing.
AGENTS WANTED.

IDEAL JUNIOR.
Has fewer parts and joints, hence simplest. Is the Lightest, Strongest, Cheapest, of all Sectional Wheel Wind Mills. Is thoroughly well made of best materials. Runs without a tail and governs perfectly. We stand behind the Ideal Junior with a strong warranty. Prices and catalogue cheerfully furnished.
STOVER MFG. CO., 507 River Street, FREEPORT, ILL.
If afflicted with sore eyes use Dr. Thompson's Eye-Water

Our Miscellany.

PERFECT THROUGH SUFFERING.

God never would send you the darkness
If he felt you could bear the light,
But you would not cling to his guiding hand
If the way were always bright;
And you would not care to walk by faith,
Could you always walk by sight.

'Tis true he has many an anguish
For your sorrowful heart to bear,
And many a cruel thorn-crown
For your tired head to wear;
He knows how few would reach heaven at all
If pain did not guide them there.

So he sends you the blinding darkness,
And the furnace of seven-fold heat;
'Tis the only way, believe me,
To keep you close to his feet;
For 'tis always so easy to wander
When our lives are glad and sweet.

Then nestle your hand in your father's,
And sing, if you can as you go;
Your song may cheer some one behind you,
Whose courage is sinking low,
And, well, if your lips do quiver—
God will love you better so.

—Exchange.

VERMONT has a Fish and Game League.

THERE is nobody or nothing in this world that is so often crossed in love as the front-door mat.

"HELLO!" said the hose to the lawn, "don't you and the mower speak?" "No, not since he cut me last year."

TEACHER—"Don't you know it's wrong to fight?"

Small boy—"Yes'm, when I'm gettin' licked."

TEACHER (at Sunday-school)—"Betty, what have we to do first before we can expect the forgiveness of our sins?"

Betty—"We have to sin first."

LADIES who are interested in making rugs, or any kind of fancy work, should read advertisement of E. Ross & Co., on page 167 of this paper.

LIFE is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart and secure comfort.

"YER look bad, Jim. Been under the weather?" "Sorter. To-day's the first time I've been out er doors in three months." "What was the matter with yer?" "Nothin'; but the Judge wouldn't believe it."—*Life*.

Send two-cent stamp for Dr. H. James' receipt of imported hemp for the positive and permanent cure of Consumption and Bronchitis. Craddock & Co., 1032 Race St., Philadelphia, Pa.

A LITTLE boy who had eaten "not wisely but too well" of Christmas dinner, subsequently said there must be a whole window in his stomach, for it was impossible he should suffer so from one pane.

LITTLE Mabel described graphically her sensation, striking a dimpled elbow on the bed carving. "Oh, my!" she sighed, "mamma, I've struck my arm just where it makes stars in my fingers."—*Babyhood*.

The advertisement of W. Atlee Burpee & Co., of Philadelphia, Pa., in this issue, was awarded the first prize out of several hundred sent in competition in a contest conducted in *Printers' Ink*. It is worthy of attention as an attractive advertisement of excellent seeds and plants.

SENATOR EDMUNDS is after the cigarette boys of the District of Columbia. He says twenty-nine states have legislated on this line, and the exclusive jurisdiction of the congress in the district must now be put in saving operation.

BEECHAM'S PILLS cure Bilious and Nervous Ills.

TRUE, unchangeable love remodels our characters, removes the weed of selfishness, making us live for something better than ourselves; makes us see new beauties in things around us, and by its sanctifying influence purifies our lives.

"Cheap Lands and Homes in Kentucky, Tennessee, Georgia, Alabama, Mississippi and Louisiana" is the title of a Pamphlet issued by D. G. Edwards, Cincinnati, Ohio, General Passenger and Ticket Agent Queen & Crescent Route, containing correct County map of these States. Mailed free on application, to any address.

GEN. BOOTH, of the Salvation Army, says he will do what he can to bring the right kind of people of both sexes to know one another. This is a part of his "Darkest England" scheme, and seems to be a huge matrimonial enterprise.

STOP THAT CONSTANT HACKING, by removing the irritation in the throat, and subduing any inflammation that may exist there, by using Dr. D. Jayne's Expectorant, a long established remedy for Throat and Lung troubles, of fifty years popularity.

If Mrs. William Astor read the begging letters that are addressed to her she would have no time for anything else, and if she responded to the demands on her purse she would be as dependent as the most unfortunate in less than a year.

"Is it a crime to be a woman?" said the pretty agitator. "If it is, it's a very capital crime," replied a gallant auditor.

NEVER be afraid to own the truth, let the consequences be what they may. Ever keep truth for your motto and guide and you will surely be the gainer in the end.

"Did you remember to be a good girl at aunty's, Mamie?"

"I don't know. I had so much fun I didn't think of paying any attention to myself."

UNREASONABLE—A hardened bachelor thus replied to the criticisms of some friends who upbraided him for not taking a wife: "You certainly could not expect me to marry a woman who'd be foolish enough to have me!"

MANY explosions in flouring mills are said to have been caused by electricity generated by belts. Even ordinary belts are found to generate sufficiently strong currents to perform the common experiments for which electrical machines are used.

THE Empress of Germany has military tastes, as well as her husband. At the late grand review on Templehof field, she was in the saddle for two hours, riding superbly and leading her own regiment of cuirassiers past the emperor. Her uniform as colonel was a habit of white cloth, embroidered on shoulders and collar with the red and silver colors of the regiment, and a three-cornered white felt hat, with many ostrich feathers, in which she looked remarkably pretty.

MONSIEUR MARCEL is a Paris *coiffeur*, celebrated for his skill in waving the hair so that the undulations remain for nearly a month. It is said that when Jane Hading was in America, she offered him \$2,000 to come out during her engagement. But he declined, with good reason, as he makes about \$160 a day at home. He did, however, come to England for \$10,000 in answer to a prayer from some dishevelled dame. One day several ladies were waiting their turn to be "waved" at \$2 a head, when the attendant entered the room and said that a lady offered \$1 for the first turn. "Oh," said Madame Baretta, who was one of the patients, "I can't wait; I offer \$6." "\$8," said a little actress from the varieties. Just then an American woman strolled in, raised her forehead to her eyes, looked disdainfully around. "\$30," she murmured. Marcel, who had been quietly "waving" during this scene, began at once on the newcomer's head. The others went unwaved.

WHILE in New England last December, one of our representatives was suffering from a very severe cold, which his doctor had been treating as bronchitis, and happening to be in the office of the Aerated Oxygen Compound Co., of Nashua, N. H., he was induced to try their treatment and was greatly relieved by it. They send, free, a book of information to all who apply for it and some of our readers may find it beneficial in cases of colds, throat trouble and other ailments.

RECENT investigations in France go to prove that the horse has no ear for music, and only a very slight understanding of time and military signals. Several circus men confessed to the investigators that they had never seen a horse with musical instincts. The popular delusion that a trained horse occasionally waltzes in time with music, they said, was unsupported by experience. The music was always played to suit the step of the horse, which was regulated by signs from the trainer. Most war horses were found to pay little attention to a signal for a charge, save when aroused by the significant movements of the rider. A troop of riderless cavalry horses were unmoved by martial trumpet calls. Altogether, the investigations concerning horses on the field of battle went to prove that the traditionally intelligent war horse could not make a correct movement in a fight, save under its rider's constant guidance.

THE INDIAN TROUBLES.

Those of our readers who have copies of our Peerless Atlas have been enabled to locate the principal points of interest, by our maps of the states of South Dakota and Nebraska. The plates for these maps were prepared before any indications of trouble with the Indians; yet they have been of great interest and value to those who wished to locate the places named in the dispatches from the "front." The Atlas is offered on such liberal terms that every body can secure a copy. It gives the population of each state, by counties, according to the census of 1890. See offer on another page.

BIRTHDAYS—Let the birthday of each member of the family be always remembered when it comes. Let there be something out of the ordinary routine in the arrangement of the table-pies, fashioned as Jennie likes them best; one of Frank's favorite plum puddings; or Julia's special liking, a loaf of ginger cake or a wonderful pudding, such as only mamma can make. There must be presents. Sometimes people may think that they cannot be afforded; but reflect. The little one needs shoes, dresses, aprons and many other articles. Purchase one or more for the birthday; it will seem just as much a present to her as though she were not obliged to have it. Next come story-books, a knitted wrap and a pair of skates (should the birthday occur in winter), a pretty little school satchel, etc. Encourage the little ones to give to each other, and remember father's and mother's birthday; too.

THE "pinhole camera" is a novelty in photography. It is a little tin box, two inches in diameter and three quarters of an inch deep. Simple as the construction is, with paper instead of glass for the negative, and a pin-hole in the cover for the light to enter, some interesting work may be done with the instrument.

A ROMAN doctor has discovered in many of the skulls in different Etruscan tombs, as well as in those deposited in the various museums, interesting specimens of ancient dentistry work and artificial teeth. The skulls examined date as far back as six centuries before Christ, which proves that dentistry is not a modern art.

TOMMY (at the breakfast table)—"Madge, I think Mr. Cutely is a 'Jim dandy.'"

Madge—"Why so?"

Tommy—"He gave me ten cents not to tell what happened in the hall last night, au' I ain't goin' to."

And just then Madge thought she heard the kettle in the kitchen boiling over and hurried out to investigate.—*New York Herald*.

HOW OLD THE EARTH IS.

M. A. d'Assier, examining the *questionem vexatam* of the earth's age, arrives at the conclusion that it is about half a million of years for the nebular and stellar period, and about twenty-five millions (of which fifteen are past) for the period of organic beings. When about twenty-six million years old, our mother earth, cold and lifeless on account of the sun's disappearance, shall be somewhat shaken in consequence of the moon rushing on her, and some time later will, in turn, rush in the sun. This affectionate meeting, if M. d'Assier is well informed, will cause a momentary outbreak of heat and light, and thus the earth will have done with its troubles.

MAN'S POWER OF IMAGINATION.

The power of imagination is supposed to be stronger in women than in men; but this was not shown in a recent hospital experiment. Dr. Durand, wishing to test the practical effect of mind disease, gave one hundred patients a dose of sweetened water. Fifteen minutes after, entering apparently in great excitement, he announced that he had, by mistake, given a powerful emetic, and that preparations must be made accordingly. Eighty out of the one hundred patients became thoroughly ill and exhibited the usual result of an emetic; twenty were unaffected. The curious part of it is that, with very few exceptions, the eighty "emetized" subjects were men, while the strong-minded few, who were not to be caught with chaff, were women.—*New Orleans Picayune*.

HOW VARIOUS NATIONS SLEEP.

In the tropics, men sleep in hammocks or upon mats of grass. The East Indian unrolls his light, portable charpoy, or mattress, which in the morning is again rolled together and carried away by him. The Japanese lie upon matting, with a stiff, uncomfortable, wooden neck rest. The Chinese use low bedsteads, often elaborately carved, and supporting only mats or coverlets. A peculiarity of the German bed is its shortness; besides that, it frequently consists, in part, of a large down pillow or upper mattress, which spreads over the person, and usually answers the purpose of all the other ordinary bed-clothing combined. In England, the old, four-posted bedstead is still the pride of the nation; but the iron or brass bedstead is fast becoming universal. The English beds are the largest beds in the world. The ancient Greeks and Romans had their beds supported on frames, but not flat like ours. The Egyptians had a couch of a peculiar shape—more like an old-fashioned easy chair with hollow back and seat.—*Boston Budget*.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

EGGS FOR SALE CHEAP from 30 varieties of choice stock. Send stamp for 24 page catalogue. J. S. SHOEMAKER, Dakota, Ill.

SILOS Valuable Information. SEND STAMP. I. G. JENKINS, OSWEGO, NEW YORK.

Williss College Shorthand, Springfield, Ohio. Largest in the world. Employment sure. Circ' free.

CATARH cured free for testimonials after cure. Add MEDICAL INHALATION CO. Church St., Toronto, Can.

RUPTURE CURED. Rupture Plaster and Healing Compound. Sample Free. EXCELSIOR R. C. MFG. CO. Buffalo, N. Y.

INFORMATION! WANTED, the address of persons suffering with RHEUMATISM in any form, Neuralgia or Lumbago. I will, without charge, direct those afflicted to a sure and permanent cure. I have nothing to sell but give information what to use that cured myself and friends after all other means had failed. Address, F. W. Parkhurst, Fraternity and Fine Art Publisher, Lock Box 1501, Boston, Mass.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

TREES For SPRING PLANTING.

The largest and most complete stock in the U. S. of FRUIT and ORNAMENTAL Trees, Shrubs, Paeonies, ROSES, Hardy Plants, Grape Vines, SMALL FRUITS, &c. Illustrated and descriptive priced Catalogue; also wholesale price list for the trade FREE. ELLWANGER & BARRY, MOUNT HOPE NURSERIES, ROCHESTER, N. Y. Established over 50 Years. (Mention this paper.)

WALL PAPER

can have our large Sample Books by express by sending business card. KAYSER & ALLMAN, 406, 408, 410, 418 Arch St., PHILADELPHIA, Pa.

Go South, Young Man!

Go where the fertile fields are ready to make your fortune for you, to an excellent climate, away from the hard Winters of the North, where you can plant a crop every month in the year, where every fruit and vegetable will grow luxuriantly, and King Cotton each year will assist you to become rich rapidly with one-half the exertion required to enable you to have a bare living at the North. Full information by addressing B. W. HITCHCOCK, 14 Chambers St., New York.

10 CENTS (silver) pays for your address in the "AGENT'S DIRECTORY," which goes whirling all over the United States, and you will get hundreds of samples, circulars, books, newspapers, magazines, etc., from those who want agents. You will get lots of good reading free and will be WELL PLEASED with the small investment. List containing name sent to each person answering. T. D. CAMPBELL, B 74, Boyleston, Ind.

AGENTS WANTED—For The Elgin Type-Writer. Practical, Instructive, Entertaining. The invention of a mechanical expert in the Elgin Watch Factory. Sells fast to Schools, Colleges, Offices and Households. Does all correspondence. Price 60 cents by mail. Novelty Type Writer Co., Oswego, N. Y. Mention this paper when you answer this.

UN To all persons who send 10c. silver within the next 30 days we will send a package containing all the following: 32 complete Love Stories by popular authors, Set of Dominees, 16 Portraits of Female Celebrities, DICTIONARY OF DREAMS, 20 Popular Songs, 134 Conundrums, 25 Autograph Album Selections, 67 Magical experiments, Love's Telegraph, Guide to Flirtation, Golden Wheel Fortune Teller, Magic and Mystic Age Tables, Game of Authors—43 pieces with full directions, 2 Morse Telegraph Alphabets, 11 Parlor Games, Calendar for the current year, Games of Shadow Buff, Letters, etc. The Deaf and Dumb Alphabet. Send 10 cents silver at once and receive this BIG BARGAIN. (Mention Paper.) Address, NASSAU CO., 53 & 60 Fulton St., N. Y.



DISCOVERED AT LAST.

A process of producing Aerated Oxygen or oxygen highly azonized at a NOMINAL COST. This is the FIRST STEP FORWARD IN TWENTY-FIVE YEARS. It is a source of universal satisfaction among physicians and invalids that SCIENCE has at last come to their relief and produced a LIQUID OXYGEN for the HOME treatment of all diseases by inhalation that can be sold for ONE-THIRD the PRICE of any so-called oxygen on the market.

The only oxygen treatment indorsed by the entire medical faculty.

We send FREE our book of WONDERFUL CURES to any address.

A FREE TRIAL at Boston office, 9 Herald Bldg, 19 Beekman St., New York, 70 State St., Chicago, 394 Congress St., Portland, Me.

AERATED OXYGEN COMPOUND CO., Nashua, N. H.

50 GOLD PLATED

WARRANTED GENUINE.

Don't buy a common looking silver watch, when you can now obtain for the small sum of \$5.85 a genuine gold plated, hunting case, full engraved watch, equal in appearance to many watches sold by retail jewelers at from \$25.00 to \$50.00. Fitted complete with our own special ruby jeweled, extra finely finished movement, celebrated for its perfect time keeping qualities and superb appearance; magnificently finished, highly polished pinions, enamel dial, specially tested, adjusted and regulated so as to give perfect results as a timekeeper. In carrying this watch you have the credit of carrying a solid gold watch, as the plating process is got down so fine now-a-days that it is almost impossible for the ordinary observer to detect the difference. The engraving is just like that on high priced watches and comes in the very loveliest and latest patterns. Some will doubt our ability to be able to supply such a watch at this price, and to convince you that we mean just what we say, we make the following most extraordinary offer for the next 30 days.

READ!

Cut this out and send it with your order, and we will promptly ship the watch to you by express, prepaid. C. O. D. with instructions to the express agent to allow you to examine it at the express office. If on examination you are convinced that it is a bargain, pay the agent \$5.85 and the express charges and it is yours, otherwise you pay nothing and will be returned at our expense. We could not make such an offer as this unless we were confident that the watch will not only please you, but be a surprise to you. This price will be for 30 days only.

THE NATIONAL MFG. & IMPORTING CO.
191 and 193 Clark Street, Chicago, Illinois.
Mention this paper when you write.

Smiles.

COMPENSATION.

Sweetheart the hour is late,
I learned to-night my fate—
You me rejected!
Though I had faith and trust,
Your gentle way was just
What I'd expected.

What though I dared admire?
You, in your brave attire,
Belle of the revel,
Ruled it o'er hearts as good—
Could not, e'en if you would,
Stoop to my level.

My funds are low, I swear;
I'm in a quagmire, where
Creditors have shoved me.
Sweetheart, bethink what plight
I'd have been in to-night
If you had loved me.

—Chicago News.

A FINANCIAL DISCUSSION.

OLD MAN MONEYBAGS (facetiously)—“Come, my dear, aren't you going to advise me? Here's a man that wants me to lend him \$10,000 on his Atchison stock. Now what do you advise me to do?”

Young Wife—“Why, you know that I don't know anything about money.”

Old Man Moneybags—“Don't know anything about money! That's pretty good, when you made as much in one day as I have made in all my life.”

Young Wife—“Why, when was that?”

Old Man Moneybags (uproariously)—“When you married me.”

Young Wife—“Yes, but all my friends have told me that I couldn't have made a worse bargain.”—Boston Courier.

BETTER OFF THAN HE KNEW.

A man who was eating a large, raw carrot stopped a woman on Duffield street the day after New Year's and said:

“Madam, could you give me ten cents to buy food with?”

“Why, you seem to have plenty,” she answered.

“Raw carrot—see!” he said as he extended it.

“Yes, but don't you know that raw carrot contains ninety-three per cent of clear nutriment against only thirty-three in mince pie or plum pudding? You ought to be thankful, sir—very thankful.”—Detroit Free Press.

FOR SHAME.

“Talk about wives,” said Farmer Hawbuck; “I've got one in a million. Why, she gets up in the mornin', milks seventeen cows and gets breakfast for twenty hard-workin' men before 6 o'clock, by George!”

“She must be a very robust woman, Hawbuck,” remarked one of his hearers.

“On the contrary,” put in the farmer, “she is pale and delikit like. Jimminy! Ef that woman was strong, I dunno what she couldn't do!”—Harper's Weekly.

IT WAS TIME.

He was sitting in the parlor with her when the rooster crowed in the yard, and leaning over he said:

“Chauticleer!”

“I wish to gracious you would,” she said. “I'm as sleepy as I can be.”

He took his hat and left, and hasn't been back since.

A GRATIFYING INDORSEMENT.

“John, Charles, William,” cried the boys' mother, “where are those peaches I left here?”

“In our midst,” returned the boys; and when the doctor called that night the mother knew that her little darlings had spoken truthfully, as well as with a grammatical accuracy that is not universal.

THE LOGIC OF EVENTS.

Customer—“Not long ago I came in here and bought a porous plaster to help me get rid of the lumbago.”

Clerk—“Yes, sir. What can I do for you now?”

Customer—“I want something to help me get rid of the porous plaster.”

ALARMING.

Fred—“What! Fight a duel on account of a woman? No, sir! If I caught a man flirting with my wife I'd invite him to come over for a day's shooting—just as I've invited you—and then, if an accident were to occur—”

John—“Heavens! I hope you don't suspect me?”—Journal Amusant.

A TROUBLE EASILY CURED.

Distressed young mother, travelling with weeping infant—“Dear, dear; I don't know what to do with this baby.”

Kind and thoughtful bachelor in next seat—“Madame, shall I open the window for you?”—Boston Courier.

THE EASTERN IDEA.

Western woman—“I don't care what other people may say, Man-with-a-hole-in-his-stockings is a good Indian.”

Eastern friend—“You don't say! When did he die?”

A WELL POSTED SCHOOL-GIRL.

A high-school girl, class A, being told by her teacher to parse the sentence, “He kissed me,” consented reluctantly, because opposed to speaking of private affairs in public. “He,” she commenced, with unnecessary emphasis and a fond lingering over the word that brought crimson to her cheeks, “is a pronoun; third person, singular number, masculine gender; a gentleman pretty well fixed; universally considered a good catch. Kissed is a verb, transitive—too much so; regular—every evening; indicative of affection; first and third person, plural number and governed by circumstances. Me—oh, everybody knows me,” and down she went.—Grand Ledger Independent.

ENTIRELY INNOCENT.

Sunday-school superintendent—“Who led the children of Israel into Canaan? Will one of the smaller boys answer?”

No reply.

Superintendent (somewhat sternly)—“Can no one tell? Little boy on that seat next to the isle, who led the children of Israel into Canaan?”

Little boy (badly frightened)—“It wasn't me. I—I jist moved yere last week f'm Mizzioury.”—Chicago Tribune.

A CLINCHER.

A young man home from college, wishing to inspire his little sister with awe for his learning, pointed to a star, and said:

“Sis, do you see that bright, little luminary? It's bigger than this whole world.”

“No 'tain't,” said Sis.

“Yes, it is,” declared the young collegian.

“Then why don't it keep off the rain?” was the triumphant rejoinder.—Spare Moments.

IT RAN IN THE FAMILY.

Philanthropist (to newsboy)—“Why do you go about in the cold wind, my boy? You'll catch your death!”

Boy—“Can't help it. Have to earn money to support the family. Mother's paralyzed.”

Philanthropist—“Doesn't your father earn anything?”

Boy—“Nope; he's paralyzed, too, most of the time.”

UNDER COVER OF LAW.

A noted crook one day said to a Cleveland judge:

“If I were to start over again, I would be a lawyer, instead of an honest crook. There is more stealing, lying, cheating and robbing under cover of the law than outside of it, and I have been robbed by lawyers as often as I have robbed other men.”—Detroit Free Press.

A SERIES OF EXPLOSIONS.

Mrs. Fatwood—“I cannot allow you to light the fire with kerosene.”

Biddy—“Sure, an' I always used it in my last place.”

Mrs. Fatwood—“And did you never get blown up?”

Biddy—“Yis, mum; most ivery day—by the missus, mum.”

THE DIFFERENCE.

Gazzam—“What is the difference between a poet and a plumber?”

Maddox—“The poet is generally poor.”

“That isn't the answer.”

“Let's have it, theu.”

“The poet pipes the lay, but the plumber lays the pipes.”

GREAT ADVANTAGES.

Among the farms advertised in Australia is one “which is situated only 17 miles from a postoffice, 123 miles from a railroad; and one who has means could, no doubt, build a church and a school-house on his own land, and thus add to the value of the property.”—Detroit Free Press.

LITTLE BITS.

Some men are born great, some achieve greatness and some become hotel clerks.

The Indian war dance is a good deal like the ballet variety. It takes men to the front tier.—Yonkers Statesman.

A faithful friend: “What sort of a fellow is he?” “He's a friend who would be willing to share your last dollar with you.”—Life.

Teacher—“You say there are six senses? Why, I have only five.” Scholar—“I know it, sir. The sixth one is common-sense.”—Detroit Free Press.

A problem: Mathematicians figure that a man 60 years old has spent three years buttoning his collar. How much time has been consumed by a woman of 45 in putting her hat on straight?—Life.

“My object in calling this evening,” he began, with a nervous trembling of his chin, “was to ask you, Katie—I may call you Katie, may I not?” “Certainly, Mr. Longripec,” said the sweet, young girl, “all of papa's elderly friends call me Katie.” And he said nothing further about his object in calling.—Spare Moments.



H. Hallett & Co., Box 880 Portland, Maine

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PAINLESS. PILLS EFFECTUAL.

A WONDERFUL MEDICINE.

For BILIOUS & NERVOUS DISORDERS SUCH AS

Sick Headache, Weak Stomach, Impaired Digestion, Constipation, Disordered Liver, etc., ACTING LIKE MAGIC on the vital organs, strengthening the muscular system, and arousing with the rosebud of health The Whole Physical Energy of the Human Frame.

Taken as directed these famous pills will prove marvellous restoratives to all enfeebled by any of the above, or kindred diseases.

SOLD BY ALL DRUGGISTS, Price, 25 cents per Box.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England. B. F. ALLEN CO., Sole Agents for United States, 365 & 367 Canal St., New York, (who if your druggist does not keep them) will mail Beecham's Pills on receipt of price—but inquire first. (Mention this paper.)

DONALD KENNEDY

Of Roxbury, Mass., says

My Medical Discovery seldom takes hold of two people alike! Why? Because no two people have the same weak spot. Beginning at the stomach it goes searching through the body for any hidden humor. Nine times out of ten, inward humor makes the weak spot. Perhaps its only a little sediment left on a nerve or in a gland; the Medical Discovery slides it right along, and you find quick happiness from the first bottle. Perhaps its a big sediment or open sore, well settled somewhere, ready to fight. The Medical Discovery begins the fight, and you think it pretty hard, but soon you thank me for making something that has reached your weak spot. Write me if you want to know more about it.



TEN POUNDS
IN
TWO WEEKS
THINK OF IT!

As a Flesh Producer there can be no question but that

SCOTT'S EMULSION

Of Pure Cod Liver Oil and Hypophosphites Of Lime and Soda is without a rival. Many have gained a pound a day by the use of it. It cures

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FOR CRAZY PATCHWORK

SADIE'S SILKEN SHOWER OF SATIN SAMPLES



ART in needlework is on the advance. We know the ladies delight in odd pieces of silk and satin, “CRAZY QUILT” making is VERY POPULAR. We are sure we have a bargain that all ladies will now delight in. Bright, handsome, odd-shaped, and pretty colored goods accumulate very fast at all NECKTIE FACTORIES; for years have been burdened and over-run with remnants of many RICH GOODS. We have thousands of pieces of silk and satin on hand which we are going to give you a big trade on. People at a distance getting the right assortment to put into sofa-pillows, quilts, etc., and we can help you out now. We are going to dispose of this immense lot EIGHT OFF. Our packages contain from 50 to 100 pieces of the best quality assorted goods, and we want to get a lot introduced into every home; then you can order as you like for your friends, and MAKE MONEY doing our work and helping yourself also. Remember these pieces are carefully trimmed, and especially adapted to all sorts of fancy art, and needle work. Many ladies sell tidies, fancy pillows, etc., at a great price made from these remnants. Order one sample lot now for only 25c. It would cost many dollars bought at a store. GRAND OFFER: If you order our great assorted lot at ONCE, we will give you, absolutely FREE, five skeins of elegant embroidery silk, all different bright colors. This silk is worth nearly the price we ask for the remnants; but we know if you order ONE lot we will sell many in your locality, so make this liberal offer. Three lots for 65c., five for \$1.00. BEST WAY. We send ONE of the above complete assorted lots FREE to all who send 25 cents for 6 months subscription to “COMFORT,” the best Home Monthly now published, or if you send for more than one lot as above, “COMFORT” goes for one year. COMFORT PUB. CO., Box 893, Augusta, Maine. Mention this paper when you write.

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This Gold Ring is 22 karats fine and is made from the pure bars of gold. Don't throw away your money buying brass rings advertised by others under misleading names but buy this 22 karat Pure Gold Ring which will be sent to any address on receipt of \$1.00. The Chicago Watch Co., 142 Dearborn St., Chicago.

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if you have a good article to sell by advertising in newspapers. So advertisers say. How did they do it? Write to us about what you have to advertise, and we will tell you how and whether NEWS PAPERS are likely to PAY YOU. J. L. STACK & CO., Advertising Ag'ts, NATIONAL GERMAN AMERICAN BANK BUILDING, ST. PAUL, MINN. Mention this paper when you write.

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AGENTS are making FROM \$75 to \$150 PER MONTH. FARMERS MAKE \$200 to \$500 DURING THE WINTER. LADIES have great success selling this Washer. Retail price only \$6. Sample to those desiring an agency \$2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars. LOVELL WASHER CO., 101 Huron St., ERIE, PA. Mention this paper when you write.

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Selections.

A RECIPE FOR A DAY.

Take a littledash of water cold
And a little leaven of prayer.
And a little bit of morning gold
Dissolved in the morning air.
Add to your meal some merriment
And a thought for kith and kin,
And then as your prime ingredient,
A plenty of work thrown in.

But spice it all with the essence of love
And a little whiff of play;
Let a wise old book and a glance above
Complete the well-made day.

—Housekeeper's Weekly.

THE HEALTH OF OUR WOMEN.

No woman admits that tight lacing injures her; it is some other woman. The worship of fashion has become so intense, and the appearance of a rival's shape arouses such a spirit of emulation, that our women continue to squeeze themselves in steel bands to such a degree that the functions of the body cannot go on normally; and the long train of ills tight-lacers know so well, but the warnings of which they will not heed, follows, ending in slow disease and final wreck. Experience seems to teach the sufferers but little, and the mothers are as ignorant as the daughters. Health is sacrificed for a spider waist. Scientific doctors have been preaching against these evils time out of mind, but the headway against them is slow. The academies and colleges for women, however, are getting to be more alive to the importance of the pupil's health. The better class of institutions are equipped with gymnasiums and provided with swimming pools and other means for developing the body and preventing the health from breaking down. Tennis and other out-door games are growing in favor. For a girl nothing can take the place of exercise in the open air; not merely a walk of a few blocks, but a good "constitutional" at a swinging gait, and that, too, without much reference to the weather. The girls of to-day will in a few years be mothers. The law of heredity is inexorable. Strong, healthy men and finely-developed, handsome women are not born of sickly, weak parents, whose blood, perhaps, suffers from the poison that can be traced back generations. Health is beauty, said the old Greeks who lived in the open air, and beauty is health.

BEARDING THE LION.

There are railway employees and there are magnates in embryo. Both answer questions, but the difference between their modes of replying is greater than that between a Prohibitionist at home and the same individual abroad. The first are civil for civility's sweet sake, and the last are uncivil for a variety of reasons, chiefly because of an overweening sense of self-importance. One of the latter kind has some sort of situation in the high-toned line at the Grand Central Station. He has an unbroken record of insolence that staggers belief and those who question him; but he received a reply the other evening that rather clipped his corners. A gentleman went up to him and politely made a number of inquiries regarding the departure of trains, to each of which he received churlishly short replies. At last Mr. Futurity Depew broke out with this characteristic specimen of Bowery humor: "Say, do ye expect me to tell all I know fer nothin'?"

"By no means," was his questioner's smiling reply, as he reached into his pocket. "Here's a quarter; just tell me all you know and give me the change." The crowd laughed derisively and the gong came in on the chorus.

NAMES WITH NO MEANING.

"Brussels carpet is not made in Brussels at all," said J. M. de la Rive, of Brussels, at the Palmer House, Chicago, a short time ago. "Nor is French glass made in France. French plate glass, or what is known to the American trade as French glass, is all of Belgian make. In Canada they call it German glass. I suppose these names are given because the carpets were handled by dealers in Brussels and the glass was first introduced in this country by French houses and in Canada by Germans."

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Not a Drug—Not a Specific—but a New Scientific Common-Sense Method of Home Treatment—Plain, Simple and Practical.

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blind can thread them. Finest silver spring steel.

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Patch, a large pkg. pretty pieces, assorted col.

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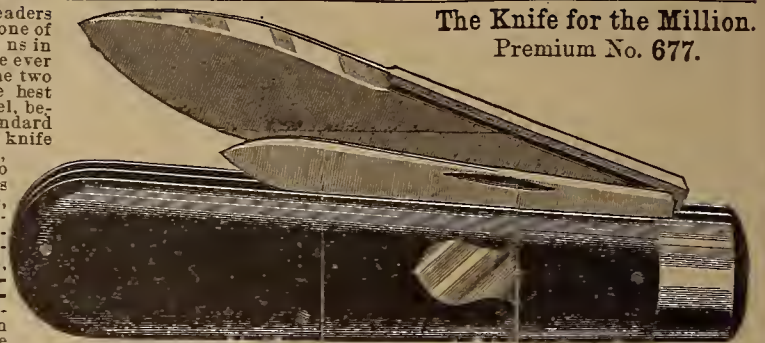
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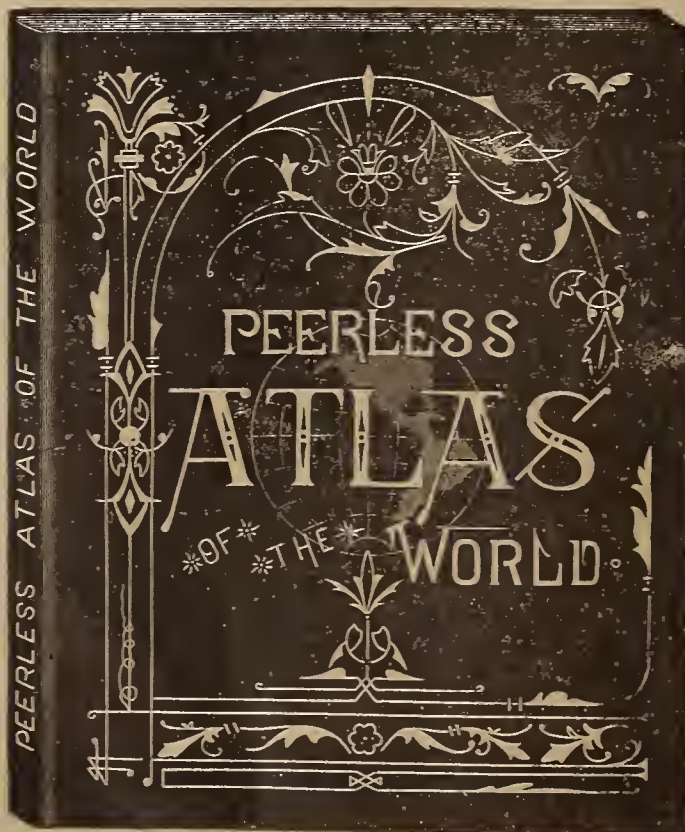
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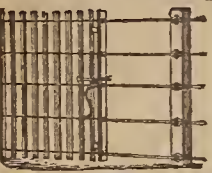
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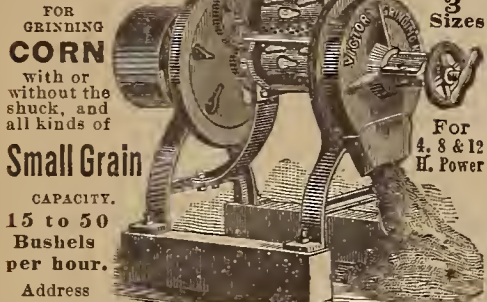
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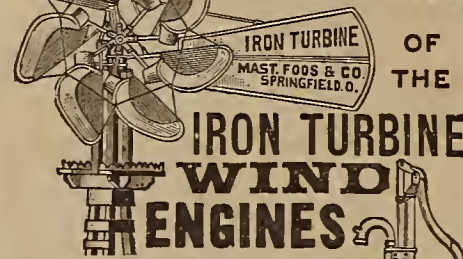


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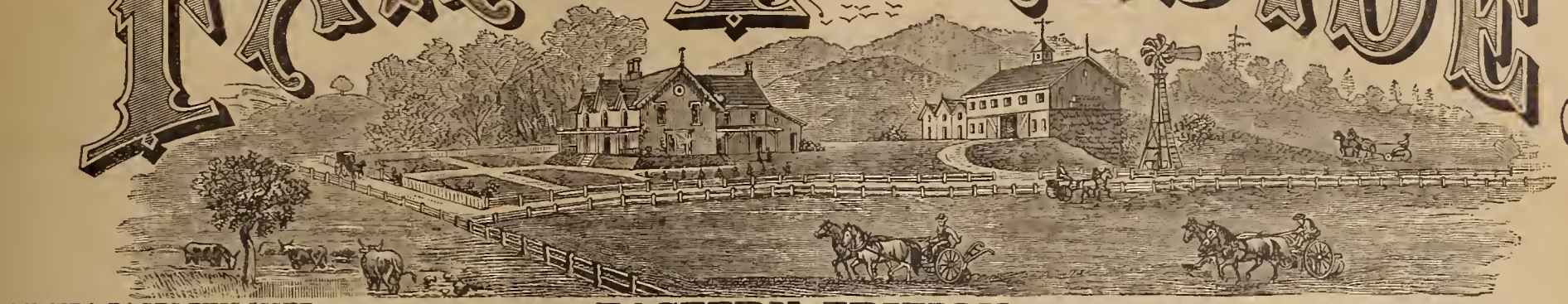
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FARM & FIRESIDE.



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EASTERN EDITION.

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Current Comment.

It is a noteworthy fact that while all the old reliable farm journals are in hearty sympathy with the farmers' movement, very few of them advocate the two schemes of government loans of paper money on lands and farm products. A number of them are warning the farmers that the movement will be wrecked if these schemes are not abandoned. Last month the *American Agriculturist*, the best monthly farm journal published, contained an economic analysis of the proposed sub-treasury scheme, by President Andrews, of Brown University. The article is fair, candid and concise, and clearly exposes the fallacies and errors in the fundamental principle of the agricultural sub-treasury plan.

The first point that the writer makes is that it is a mistake to think that harvest brings to the nation a sudden accession of exchangeable wealth, calling for expansion in the circulating medium. The nation's wealth grows at a nearly constant rate throughout the year. But for the concurrent origination of other wealth, surplus agricultural produce could not be marketed at all, however much money might be in circulation, and therefore would not constitute wealth. Farmers practically exchange their crops for supplies they need. These must be in existence before the exchange can be made, and they come into existence gradually, just as crops are grown. The circulating medium should be expanded gradually, not suddenly, as the warehouse plan provides. He recognizes the peculiar need of money in agricultural localities after harvest time, but the remedy for this, he says, is the extended use of banking facilities in the way of deposits and checks.

The sub-treasury scheme would only aggravate the evil. It is artfully framed to fleece the farmer by forcing him to sell at low prices and buy at high. The effect of all the farmers depositing grain about the same season each year, will be to greatly increase the volume of currency in circulation after they have deposited their grain, which will increase the price of everything they have to buy after they have gotten the money to buy with. The volume of money will be doubled just after the farmer has nothing to sell, and just when he wants to buy. If it doubles the volume of money it also doubles the price of what he has to buy. Prices might not rise exactly in proportion to the growth of the currency, but they would rise, and rise just at the wrong time for the farmer.

The scheme would effect ruinous per-

manent inflation of the currency. Against warehoused produce, eighty per cent of its value is to be issued in greenbacks, besides which the whole value is to be made a negotiable thing through the instrumentality of warehouse receipts. The volume of currency would be greatly increased. This new supply would be indefinitely out of proportion to the need after harvest, and at the end of the agricultural year, the month before harvest, while it would see reduction enough in the currency to greatly reduce prices, would not witness the calling in of all the greenbacks and crop certificates issued against crops since the preceding harvest. Produce could and would be re-deposited whenever profitable. Depositors borrowing money at one per cent would turn brokers and loan it to others at three or four per cent. They would be a special class favored by the government.

If the scheme works well with farm products it is to be extended in other lines. Should the device for increasing money take this wide sweep, the owners of warehoused goods would be in a condition to become the purveyors of loanable funds to the entire world. Only one thing would prevent this: the greenback would not long continue at par with gold or even silver. The scheme would from the first be distrusted, and each greenback pushed to some sub-treasury in demand for coin. Gold and silver would leave the circulation, and we should be thrown as hopelessly as Russia or Austria upon a paper monetary basis. Everyone knows what the inevitable tendency is when prices have lost relation to a coin foundation. Money having depreciated and raised values, ceases to be self-regulating in volume. Demand, losing all relation to amount of true money and permanent property, inflates prices, which in turn stimulates exchange, creating new demand for circulating medium and indefinitely multiplying all forms of indebtedness, until at length the discreet decline to give further credit, and a crash comes. In illustration is given Law's bank in France that issued paper money regardless of security, and the issue of *assignats* by the French revolutionary government, two schemes that ended in financial ruin.

Let one such financial hurricane sweep over the land and a hundred-fold more mischief would be done than enough to offset whatever slight advantage might come at first from the operation of the warehouse idea, and the evil would fall far the most heavily on the wage-workers and small property holders. This measure of finance might work smoothly for a short period, but in the end would bring disasters to the farming population.

We receive a great many letters both for and against both the sub-treasury and land loan schemes. The sub-treasury seems in most favor with the cotton farmers of the South, but they are not unanimous. The following from a Georgia subscriber is a fair sample of numerous letters: "I am an Alliance man, but not wedded to the sub-treasury scheme; in fact, I am opposed to it. I want good money in mine. If the farmers of the South would quit buying on credit and issuing time drafts, and quit raising so much cotton and go to producing more corn, bacon, flour, etc., they would not need money so badly as they

do now at times." This is doubtless true. Many southern farmers are in financial bondage to their cotton factors from one year's end to the other, who could gain their independence by diversifying their crops and producing things at home which they now buy from other sections of the country.

An Illinois subscriber writes: "In the January 15th issue you had a short editorial on the sub-treasury scheme that pleased me and my neighbor readers of FARM AND FIRESIDE. We would like to have your opinion of the effect low interest would have on the poorer class of farmers. Would the wealthy buy up all the land they could and get their interest in rents?" In reply we would say, briefly, that if the rate of interest were lowered so that every borrower could take advantage of the reduction, it would be a great benefit to the farmers and everyone else struggling under debt. But to lower the rate of interest to one favored class only would not benefit those who are in most need of it. Under a scheme of government loans on land at one or two per cent, those who have the most land in their possession are in a position to get the most benefit out of the scheme. They would be a highly favored class, and would go into the profitable business of loaning money to their less fortunate neighbors who do not possess land. Such a scheme would result in a scramble among wealthy speculators to obtain possession of land, and would temporarily inflate land prices. And rents would advance, as you suggest.

Again, how can the government loan money at one per cent when it pays three per cent, at least, for the money it borrows, without making up the difference by taxing the people or without going into bankruptcy? This government land loan scheme, if adopted, would be class legislation of the most pernicious sort.

ANY currency not redeemable in gold or silver coin is a failure," is a red rag to the fiat money bull. The statement brought us a number of letters on the money question, from the believers in government printing press money. They read like the revival of the literature of the greenback craze, which afflicted the country about seventeen years ago.

We do not believe in an irredeemable paper currency. We do believe in honest money. We believe in gold and silver coin, equal in value with each other, and a paper currency based on them. We do not believe in a debased coin or depreciated paper currency. We commend our correspondents to the study of the following from the last speech of Secretary Windom:

As poison in the blood permeates arteries, veins, nerves, brain and heart, and speedily brings paralysis or death, so does a debased or fluctuating currency permeate all the arteries of trade, paralyze all kinds of business, and bring disaster to all classes of people. It is as impossible for commerce to flourish with such an instrument as it is for the human body to grow strong and vigorous with a deadly poison lurking in the blood. Such a currency is bad enough in domestic trade, but it is absolutely fatal to the prosperity of foreign commerce. Free and unlimited coinage of silver by the United States, while the other great nations pursue an opposite policy, would invite all the owners of that metal throughout the world to exchange $37\frac{1}{4}$ grains of pure silver, worth about eighty-three cents, for 25.22 grains of pure gold, worth everywhere one hundred cents. Nearly all the nations of Europe are

anxious to exchange their silver for gold, and they would at once accept so tempting an offer. The mint statistics of the treasury department show that the stock of full legal-tender silver in Europe amounts to \$1,101,400,000, and that of this amount the banks of France, Germany, Austria, Hungary, the Netherlands and Belgium hold \$428,866,665. A large part of these vast stocks of silver would be ready for transfer to us at once, and the swiftest steamers would be employed to deliver it to the treasury, in order that with the proceeds the owner's might buy gold exchange on Europe before our stock of gold should be exhausted.

THE reciprocity treaty with the great republic of Brazil marks an era in our commercial history. It opens up for our surplus agricultural and manufactured products the most promising market in South America. Other treaties will follow until reciprocal trade relations are established between the United States and all other countries on the American continent. The section of the McKinley tariff law under which reciprocity treaties are made reads as follows:

That with a view to secure reciprocal trade with countries producing the following articles, and for this purpose, on and after the first day of January, 1892, whenever and so often as the president shall be satisfied that the government of any country producing and exporting sugars, molasses, coffee, tea and hides, raw and uncured, or any of such articles, imposes duties or other exceptions upon the agricultural or other products of the United States, which in view of the free introduction of such sugar, molasses, coffee, tea and hides into the United States he may deem to be reciprocally unequal and unreasonable, he shall have the power, and it shall be his duty, to suspend, by proclamation to that effect, the provisions of this act relating to the free introduction of such sugar, molasses, coffee, tea and hides, the production of such country, for such time as he shall deem just; and in such case and during such suspension duties shall be levied, collected and paid upon sugar, molasses, coffee, tea and hides, the product of or exported from such designated country.

In treaties made under this act the principle of reciprocity will be applied only on the lines of a protective tariff. The principle will apply either to protection or free trade; so it may be considered to have become the established policy of the government, whether in the future we have protection or free trade. Indeed, it is only by the principle of reciprocity that this country could ever secure real free trade if it wanted it. For if we were to abolish our whole tariff system, and countries with which we trade retain theirs, our so-called free trade would be a very one-sided affair at best.

Reciprocity treaties can secure real free trade by compelling other countries to abolish their customs duties when we abolish ours. The importance of this will be understood when we come to consider the fact that out of about 468,000,000 of civilized people, only 38,000,000, the people of Great Britain, are without protective tariffs. And even England has very adroitly arranged her revenue tariffs to protect herself.

DAIRYMEN, are you thinking about building and filling a silo next season? If not, why not? Are you considering the subject of winter dairying? Now is the time to plan and prepare for it. It is more profitable. There is less competition. The products bring higher prices. With proper grain rations, and sweet clover hay or bright corn fodder, or, better still, sweet ensilage, you can produce a pound of butter cheaper in mid-winter than from grass in June.

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Our Farm.

SUGGESTIONS FROM THE EXPERIMENT STATIONS.

BY JOSEPH (T. GREINER.)

COLLYHOCK RUST.—This is a bad immigrant from Europe, and it seems to be spreading. In places where it has become established, it appears in May and June on the leaves, stems and petioles of the host, having apparently wintered on the radical or root leaves. It shows its presence by spots, which are yellow at first, but soon become wart-like and brown, or even gray. These spots and the mycelium (or spore roots) within the leaf may so increase as to cause the leaf to wither, dry up and appear as if scorched by fire, long before the appearance of the flowers. In many cases no flowers ever appear. Professor W. R. Dudley, of Cornell University, sounds a note of warning in bulletin XXV of the Cornell University Experiment Station. The old remedy (published in 1874 in *Gardener's Chronicle*, namely: Permanganate of potash, saturated solution, two tablespoonfuls; water, one quart; apply to the spots and all diseased parts with a sponge and not a syringe or sprayer) is easily obtained and cheap, and the only one as yet suggested. Like most other old remedies for fungus diseases, it may have to yield to the newer copper treatment.

CORN TASSEL AND GRAIN.—The same bulletin reports a most interesting experiment with corn, and one having a great practical bearing. The question to be settled was whether the removal of the tassel as soon as it can be seen will increase the yield of the grain. Consequently, the tassels were removed from every alternate row, with the effect of increasing the number of good ears and the weight of merchantable corn on the stalks thus treated, a little more than fifty per cent. This is an enormous gain and well worth consideration by every corn grower. The question is only to what extent can we remove the tassels, for there must be a certain proportion left to furnish the required pollen. If the gain is always as large as indicated in this experiment, it certainly must pay the grower to remove all that it is safe to do. Secondary, but of not less interest to me, is the question whether this gain is due to prevented pollen production. The indications are that "pollen production is an exhaustive process," which I have heretofore been unwilling to admit.

PLANTING CABBAGES.—Prof. Bailey, in the same bulletin, tells us that his experiments show the doubtful utility of deep transplanting in case of cabbage plants. I think it depends very much on the season and the plants themselves. If the plants are spindling and weak and the season dry, deep setting has its great ad-

vantages. This is especially the case on deep, loose, sandy loam or sandy soil.

Do VINES MIX.—My personal experience in growing cucumbers, melons and other cucurbits, is that the danger from mixing is not near as great as generally supposed. I have never seen or grown a hybrid between melon or cucumber, between watermelon and muskmelon, or between melon and squash or pumpkin, and have ridiculed the idea that pumpkins, planted in a watermelon field, could exert any influence whatever upon size or quality of the melons. Prof. Bailey's experiments with cucurbits furnish rather substantial evidence in the same direction. A large number of hand pollinations were made at the experiment station, and in no case was any immediate influence of the pollen obtained, except such as was due to imperfect development, caused by insufficient or impotent pollen. It appeared that pollen taken from cucumbers was not potent on melons. Ninety-seven muskmelon flowers of various varieties were pollinated by cucumber pollen of many kinds. No fruits developed. Twenty-five cucumber flowers were pollinated by muskmelon pollen. Only one fruit developed, and that was seedless. This shows that melons and cucumbers do not mix, and that the influence of the one upon the other is fictitious. It was also found that only the group of squashes, including the scallops, common crook-necks, cocoanut, Bergen and others belonging to the same species (*Cucurbita pepis*), will cross readily with the ordinary field pumpkin and each other, while the other group, including the Hubbard, Marblehead, turbaus and others of the species *Cucurbita maxima*, does not hybridize with the field pumpkin or any member of that species. Here we have the proof of the pudding. I have for years preached that it is entirely safe to plant all sorts of vines in close proximity, if grown for consumption, not for seed, and that even the mixing of varieties of the same species of cucumbers in the seed is not so common as ordinarily supposed. These are important facts, interesting both to the gardener and the seed grower.

Prof. Bailey brings out still another fact, one of immense importance to originators of varieties. In squashes and pumpkins the pollen is impotent upon pistils on the same plant, so that true inbreeding does not occur. In some cases the fruits develop and mature, but they invariably bear poor seed.

RECLAIMING GALLED OR WASHED LANDS.—The agriculturist of the Tennessee Agricultural Experiment Station, Mr. Paul F. Kefauver, treats this subject in Bulletin Vol. III, No. 4. The most profitable disposition which can be made of these galled lands, he says, is to get them down in a good, permanent sod as soon as possible, and keep them in sod. The process by which this is done consists of the following steps: Plowing, subsoiling, working manure into the surface, seeding with various grasses and clovers and mulching in May. The advantages of a mulch, which have long been generally recognized, are the following: It preserves moisture in the soil for summer use, maintains a good capillary connection up to the very surface, prevents breaking and washing, protects it as a blanket in winter, adds vegetable matter to the soil by its decay and generally livens up the soil. It is also an old observation that soil becomes richer in nitrogen when covered by mulch. It is only recently, however, that it is suspected to be due to the agency of soil microbes or bacteria, which are present in the decaying vegetable matter used as mulch, and which feed on the free nitrogen of the air and make it available for clover, peas and similar plants. When we spread a mulch to decay on the land, especially such as damaged ensilage and clover-halm, which contains great numbers of these bacteria, we inoculate the soil with them. Here they come in contact with the roots of the leguminous plants, producing in various places an irritation of the delicate membranes and causing the growth of excrescences (nodules or tubercles). In these excrescences the microbes flourish, multiply rapidly, then die, and by their decay give up to the use of the plant roots, among other elements, also the nitrogen which they have appropriated from the atmosphere.

The silo microbes have also proven their ability to take their required supplies of lime and potash from solid fragments of gypsum and feldspar, which soon becomes available plant food in the same way. To reclaim ordinary, worn-out lands, the bulletin advises to apply a sack of good superphosphate, or phosphate and potash, per acre upon well prepared land, with a seeding of clover to be turned under, and follow with any good mulch. This is the latest scientific and perhaps, also, the most economical and practical method.

ALFALFA OR LUZERNE.—There has recently been much inquiry about this crop. In Farmers' Bulletin, No. 2, Office of the Experiment Stations, U. S. Department of Agriculture, the following summary of the disadvantages and advantages of the plant appears: Disadvantages: (1) It is not easily established. (2) It is less hardy than clover. (3) If allowed to grow too long its stalks become hard and woody. (4) Except in dry regions cattle cannot be safely pastured on it. (5) It requires peculiar treatment to make good hay. Advantages: (1) When established it does not run out. (2) It withstands drouth much better than clover. (3) It grows rapidly and may be cut early in the season. (4) It gathers a large amount of nitrogen from the air as well as from the soil, and is therefore very valuable as a fertilizing crop. (5) It furnishes several large crops of green fodder each season. (6) When properly cured it makes an excellent hay. (7) It is relished and digested by all farm animals and is an excellent flesh and milk producer. (8) It makes muscle rather than fat, and is therefore valuable to use with corn and other fat-producing crops to make a well-balanced ration for cattle.

It will be seen that alfalfa is a very valuable thing, both for feeding and as a fertilizing crop, but it requires peculiar conditions of climate and soil for growth, and careful culture and curing to make it a profitable crop.

MAPLE SUGAR MAKING.

The bounty offered to the manufacturers of this delectable sweet by the new tariff law, will no doubt give a new impetus to this industry. In no branch of farm industry has greater progress been made and greater changes in process of manufacture been wrought than in this. The difference between the best maple sirup and sugar of the present time and the average of that produced a quarter of a century ago, is so great as to be hardly conceivable.

Indeed, a large proportion of that made thirty to thirty-five years since would hardly be of a quality that to-day would bring a price in any of our markets sufficient to pay the cost of production, while a really first-class article now is readily salable at such a price as to bring considerable of profit to the maker.

Yet there is even now a great deal of maple sugar made in our country, especially in some localities, that is little if any better than much that was made during the period to which I have referred.

The introduction of new and improved sugar-making apparatus has wrought great changes in the methods, and it has come to be thought, especially in some sections where this industry is largely carried on, that only by the use of these new appliances can sugar making be successfully and profitably done. While these improved evaporators and other apparatus used for this work are a great convenience, and no doubt may often be most profitably used, especially if the work is conducted on a large scale and one has the means wherewith to purchase the same, they are not an absolute essential to the production of a really first-class article, which I know can be produced if proper care and attention be given to the work, even where the sap is caught in home-made, wooden buckets and boiled in the old-fashioned, open pans. I know this can be done, for I have done it; but it is only by the greatest of care in all the details of manufacture, from beginning to end, that it can be accomplished. But there are many who have maple trees enough to make, say from five hundred to one thousand pounds of maple sugar, or its equivalent in sirup, per year, who may not feel able to purchase these high-priced apparatus, and to give a few suggestions and directions by which such may make a success in the production of a first-class quality, may be a benefit to some of your readers.

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SOLD EVERYWHERE.

The first, if not the most important essential to success is absolute cleanliness in all the details, from first to last. Without this a strictly first-class product cannot be made, even with the best evaporator ever invented; while if this can be secured the best in quality can be produced, even from sap that is caught in wooden buckets and evaporated in common, sheet-iron boilers.

Our grandfathers would probably have doubted, had they been told that strictly pure maple sugar had of itself absolutely no color; yet such is the case. The very best now produced is really a pure white, or at least so nearly so as to pass for white. True, there is but little found in our markets in its season but that has more or less of color to it; but it is the very best of which I am now speaking. Allowing no foreign matter of any kind to enter the sap from any source, from the time it leaves the tree until it is converted into either sirup or sugar, and by hastening the process of manufacture, from beginning to end; as by standing, particularly in vessels that have been long in use, a change will take place in the sap. The sooner it is boiled down the better will be the results.

The gathering-tub or vat, which is usually fastened to the sled on which it is drawn, should be kept scrupulously clean, as well as the store-tub into which it is emptied. The sap, when poured into the gathering-tub, should be passed through a fine, cloth strainer, which will be arranged in some way to correspond with the method by which the sap is got into this vessel. The most satisfactory arrangement I have ever used for gathering sap is a barrel or cask, made larger at the bottom than at the top, with a small cover hinged into the top head, opening outward (of course, the barrel must be double headed), and the cloth strainer fastened into this opening, so that the sap all passes through it, thus removing all leaves, pieces of bark, etc.

The location of the boiling place is a matter of considerable importance. It should, of course, be as near the center of the "bush," or camp, as is practicable; but if possible, it should be under a knoll or on a hillside, where the evaporator, or arch for boiling, if common open pans are used, should be at the lowest point. Just above this (and high enough, if it can be, so the sap may be conducted into the boilers by leaders of some kind) should be placed the tub, or tubs, for storage; and still above this a bridge or platform of some kind arranged, on which the sap may be drawn with the sled, so as to be drawn out into the storage, and then from there drawn into the boilers as needed; and thus obviating the lifting of any of the sap after it is first placed in the gathering-tub until it is taken from the fire as sirup.

By sirup I do not mean the manufactured sirup which is ready for market, but that which is produced by "siruping off" in the camp, a process familiar to all sugar makers.

The boiling arch, where open, sheet-iron pans are used, must correspond in

form and size to that of the boilers used, and may be built of either stone or brick. It should be tight all around, except at the front end, which is open and laid in mortar or cement of some kind. If built up around the sides of the pans, so as to prevent the fire from reaching the sides at any point, all burning on the sides will be avoided. It was this burning on the sides of the boilers or kettles that helped largely to give the maple sugar of "ye olden time" the fine amber and the maple flavor of which we often hear old people speak, and in which, according to their judgment, that of the present day is so much deficient. At the back end of the boiling arch a casting, with stove-pipe holes at each end, may be placed and pipes used for producing the requisite draft, which will be much cheaper than a chimney built either of brick or stone.

The sirup, when taken to the house, should be at once strained (preferably through a flannel cloth) into a firkin or some other deep vessel, into the side of which, two or three inches above the bottom, is inserted a faucet for drawing off the sirup after it has thoroughly settled. Then, if this sirup is not too thick, all sediment in it will settle to the bottom and below the point which it is drawn from. As I said before, the quicker it is converted into sirup or sugar, the better it will be, so that the sooner after it has had time to settle the finishing process of boiling it into either marketable sirup or sugar is performed, the more satisfactory will be the results, as a rule.

The old-time process of cleansing the sirup with either milk or the white of an egg, to cause a scum to rise upon it in which it was supposed all impurities were removed, is an obsolete practice. More impurities were left in the sugar in this manner than were ever removed by their use. To keep out the foreign matter of all kinds, from beginning to end, is all-important to the best success; for although a very little color from any source will not show in the sap itself, when it is concentrated in a few quarts or a few gallons of sirup, it will be sufficient to give it considerable of a tinge and often to materially affect the flavor. E. J. BROWNELL.

New York.

CORN DOWN SOUTH.

All in all, probably no other American crop is of equal importance to corn. It is about the most universally grown cereal we have. Every state is adapted to its cultivation, though of course not in the same degree. The North-west may be regarded as the greatest corn-producing portion of our country.

The South has never rated very high as a corn country; yet actual experiments have proved that *Tea Maize* is one of the best and most profitable crops the southern farmer can raise. Heretofore cotton has so monopolized the agricultural energy of the South, that corn and other food crops have been much neglected. Could a full crop of cotton in the South and a big crop of corn in the North-west be made every year, the southern farmer might find it best to devote his entire time and energy to growing the fleecy staple, and buying his corn in Chicago, Kansas City or St. Louis. But he can never tell six months beforehand whether the seasons will be favorable to this condition of things or not. Hence, every southern cotton grower should make sure of a good home supply of corn. He should plant just as many acres in corn as in cotton, and not plant more of either than he can thoroughly cultivate—say ten acres of each to the plow.

The possibilities of the South for growing corn were thoroughly demonstrated in the prize competition gotten up in 1889 by the proprietors of the *American Agriculturist*. Out of forty-five prizes offered for the best single-acre yields, the southern states captured fourteen of them, the first grand prize included. The average yield of these fourteen crops was ninety-five bushels per acre, the largest being two hundred and fifty-five and the smallest fifty-one bushels.

To make corn a profitable crop in the South (or anywhere else, as to that matter), manure should be liberally applied. I have found cotton seed one of the very best of manures for corn. The old custom was to pile the seed in an immense heap as the cotton was ginned and allow it to take all the winter's rain, and become

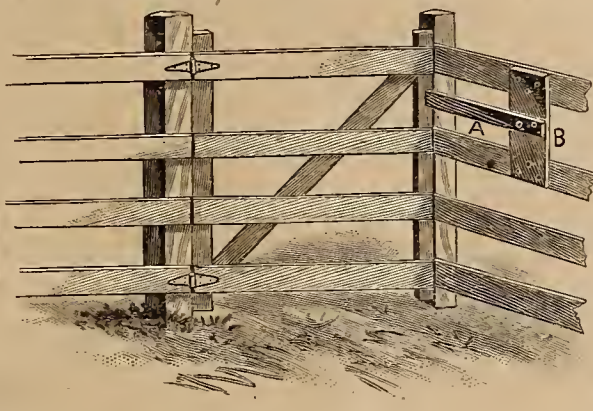
rotten. Later experiments, however, fully demonstrate that sound seed are best for manure. In the process of decay much of the valuable fertilizing properties escape in a gaseous form; and if the seed is allowed to decompose in the heap, of course this volatile manure is lost.

About the best manner of applying cotton seed to corn is this: Run a scooter in the old water furrow, followed immediately by an eight or ten inch sweep. Into this trench sow a liberal amount of sound cotton seed, say twice or three times as much as is usually sown when planting cotton. Throw two good furrows into this trench with a turning-plow, covering as deeply as possible. If this work is done in January or the first half of February, the seed will soon begin to decay, and the soil will catch all or nearly all the fertilizing matter.

When you plant corn, just reopen the first-made furrow and drop the kernels right among the mass of decaying cotton seed; cover immediately. With good cultivation and seasons you cannot fail to make a fine crop. DICK NAYLOR.

GATE FASTENER.

Mr. C. Saudfords sends a description of a simple fastener to be used on a gate in



the corner of the fence. In the cut A is a thin, springy piece of board nailed to B in such a way as to hold the gate shut until pushed back.

DOING UP A HORSE'S TAIL.

I will send you an easy and quick way of doing up a horse's tail in muddy weather.

First, take the tail in the left hand; with the right hand take hold at the upper end of a small bunch of hair, about eight or ten inches long; then select another bunch of the very longest hair in the tail, about the size of a man's finger. With both hands twist what is left in the left hand three or four times to the right; then with the right hand put it under and catch it with the left hand, and hold it till you take the long bunch or braid with the right hand and twist around, or wind around once or twice, according to the length of the hair, from the opposite direction. Then take the end of it, with what you have in your left hand and the short bunch; twist all together in a hard twist, double it and find the band of the braid that you wound around the tail, and stick it under twice.

After a little practice any farmer, by observing the above rule, can do up his horse's tail anywhere, on the road or in the stable, in two or three minutes, without strings or ribbons, and it will stay till taken down. I have never seen or heard of a better and quicker way. I got it from a French stage driver. J. D. P.

BUYING SEED.

In buying seed, particularly grass seed, the farmer must not only trade with reputable dealers, but he must also personally inspect the seed he buys, for his own protection. He ought to be acquainted (he is, usually) with the seed he wishes to buy, and if he find in it seed that he does not recognize, it should not be purchased.

There is so much carelessness, if not something worse, often, in harvesting seed, that the utmost precaution on the part of the buyer is necessary. The crop, the welfare of the farm and the farmer depend on this careful scrutiny of seed.

A farmer bought grass seed warranted to be pure. With the grass came up what proved to be the yellow daisy, never before seen in that region. It remained, is there now, and is reaching out further and further every year. In the roadside it creeps throughout the town, and appears in every piece of grass land.

The man who harvested and sowed the grass seed in which was the seed of the

daisy, committed what ought to be considered an offence punishable by law. He is responsible for the introduction of a pest that made less productive and less valuable a whole town-county, for there is no limit to the spreading of the plant. The man who wishes to buy a farm will not buy one, if he be wise, overrun with the white or yellow daisy, wild turnip or wormwood. The presence of any of these "spoil the looks" and add greatly to the cost of cultivating. GEORGE APPLETON.

BREAKING COLTS.

A great many object to breaking colts young, claiming it stops growth. I think that is nonsense. A good many uses can be made of the colts; besides they make much safer horses when broken young; and a good, safe horse is worth more money to anyone. I have broken three yearlings and three three-year-olds and will give my methods as well as show the difference. The first colt I ever broke was a yearling. I bitted him with bridle and surcingle about a week, letting him run in a yard two or three hours a day, well checked up; put him alongside of a good, brisk walker, to drive to a wagon, giving the colt three inches advantage on the evener against the fully matured horse. He drove well from the start. When two years old I harrowed with him, giving him two inches advantage. In the fall I bought a two-year-old to mate him, broke it in the same manner and drove them to a cutter and used a light rig in summer. When five years old these colts would or could cover ten miles in one hour, and seemed tireless.

The next two colts I broke were three-year-olds. After getting them used to harness in the barn, I drove around first with no load. They were gentle and kind colts and when I hitched them to a roller they went fairly well. I drove to the wood lot and put on a little jag of stove-wood, the next time a little more, and so on until I could draw a fairly good load.

I think it is a great mistake to load full on first trial of horses. It is apt to make balky animals; and if one wants free walkers and good travelers, they never should drag the life out of them with too heavy loading. If they stop there is generally some good reason; the hames may be too tight or loose, one tug may be shorter than the other, the whiffle-tree caught or something wrong. Look and see first what's up. I have known a horse to stop by the tie strap coming under his feet; it had fallen out of the ring and was dragging. Do not make too free use of a whip or check too tight, if you want your horses to be free drivers. Blanket them if you only stop a few minutes, and do not water too freely on the road.

The fifth colt I broke was a yearling and it worked well from the start, as it had been led alongside of its mother with a halter from the time it was a month old. She is now three years old, gentle, kind and true.

Rob, I bought this spring, to mate my three-year-old Maud. He was wild as a hawk, would start at every motion made toward him; when in the stable he would snort and jump when approached. (He was a nice looking three-year-old) but had never been handled properly. I used him with the utmost kindness, putting him and talking low to him; in a few days I put on bits, let him champ away for awhile, put on a harness, let him stand until he was quiet; then put him alongside of a good, stout horse with neck-yoke, looked to see if the harness was all right and started them. My, but he was a wild one. He tried every way he could devise to get away, but it was no use; the old horse held him, stopping him when he tried to run, taking him along when he thought he wouldn't, turning him to the right, etc., as wanted; he fooled until tired out; then I hitched to a bob-sled, on bare ground and told them to go. He started to run; I whipped up the old horse and let them go around the field; when he wanted to stop, made him go until I was ready; kept him at it until he would go or stop as I wanted. The next day I put him alongside of my colt and hitched to a plow, having a man to hold it while I drove, and plowed until he showed signs of fatigue and then put him up. Two weeks of steady plowing and dragging brought him to time and he now

works nicely for me, but is afraid of strangers yet and would not be a safe horse single. I do not use blinds, as he seems more timid with them on. He was always let run the same as ranch horses. Ranch horses are not a safe class of horses. PRACTICAL FARMER.

DEPRESSION OF AGRICULTURE.

The working force in the United States is about twenty-three millions, with ten millions engaged in agriculture; with sixteen billions capital invested. I think it would be safe to say that the profits hardly pay for the labor, leaving nothing for the use of the land, for keeping up the buildings, fences, machinery, teams, taxes, insurance, etc.

From 1870 to 1875 the average value of an acre of wheat was \$13.66; corn in 1870 \$15.54, in 1889 \$7.63; wheat in 1889 \$7.63, while the acre value of the oats crop has dropped in twenty years from \$12.78 to \$7.24. The average yield in bushels has varied but a trifle. Is the depression from scarcity of money, high freights, gambling or overproduction?

For the last twenty years the population has increased sixty-six per cent, while the grain crops, in fact, nearly all farm crops, have increased, on the average, over one hundred per cent; thus production has outstripped population from thirty-five to forty per cent. Likewise, we find a decline in values from thirty-five to forty per cent, not including the short crops of 1890. It is plain, if we could cut down production thirty-five or forty per cent, we should get as good prices as we did from 1870 to 1875, when a small surplus was raised, which was readily taken by the foreign demand. Our surplus has been crowded onto foreign markets, depressing prices all over the world. Why this overproduction?

A great many farmers are deeply involved in debt; every nerve is strained to produce money crops to live, pay taxes and high interest, with the ultimate hope of lifting the mortgage; while those who are not in debt, are forced into increased production by low prices, in order to keep out of debt and keep their heads above water. The harder they work, the more they produce, and the less they get. It is like struggling in a mire of quicksand; the more you struggle, the deeper you get. The way out I cannot see. It looks now as if the money lords would own the country at the end of another twenty years, and the farmers will become tenants and serfs, like unto good old Ireland. C. W. CARPENTER.

March April May

Are the best months in which to purify your blood. During the long, cold winter, the blood becomes thin and impure, the body becomes weak and tired, the appetite may be lost, and just now the system craves the aid of a reliable medicine. Hood's Sarsaparilla is peculiarly adapted to purify and enrich the blood, to create a good appetite and to overcome that tired feeling. It increases in popularity every year, for it is the ideal spring medicine.

Very Much Run Down.

"I have been taking Hood's Sarsaparilla for about one month. I was very much run down in health, had no strength and no inclination to do anything. That tired feeling has left me, my appetite has returned, and take it all in all, I am like a new man. We all take Hood's Sarsaparilla."—CHAUNCEY LATHAM, North Columbus, Ohio.

"Early last spring I was very much run down, had nervous headache, felt miserable and all that. I took Hood's Sarsaparilla and was much benefited by it. I recommend it to my friends."—MRS. J. M. TAYLOR, 1119 Euclid Avenue, Cleveland, Ohio.

Purify Your Blood

"My daughter had been ailing some time with general debility, and Hood's Sarsaparilla was recommended to us. After she had taken three bottles she was completely cured and built up. It is with great pleasure that I recommend Hood's Sarsaparilla."—BEN M. MIRRIELES, Supt. Cincinnati & Louisville Mail Line Company, Cincinnati, Ohio.

Peculiar Building Up Power.

"I gladly attest the peculiar building up power of Hood's Sarsaparilla. For some time I was unable to attend to business, but finally at the request of a friend I used part of a bottle of Hood's Sarsaparilla, which gave tone and strength to my system, and made me feel young as when a boy."—GRANVILLE T. WOODS, 61 and 66 Lodge St., Cincinnati, Ohio.

N. B.—Be sure to get only

Hood's Sarsaparilla

Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

Our Farm.

NOTES FROM MY HOME GARDEN

BY JOSEPH.

TREE TOMATOES.—The Mansfield tree tomato is now being largely advertised. I have mentioned it on former occasions as a most vigorous grower and a free bearer of very large and very solid fruit. In solidity, I have never met its equal except in the Annie Dine and Ruby Queen, which closely resemble it in every respect. Mr. Wm. Mansfield, the originator of the Mansfield tree tomato, states in a recent letter, that he has grown a tomato tree twelve feet in height, and a single fruit two pounds six ounces, and the average tomato tree to produce from twenty to thirty pounds of ripe fruit. The illustrations of this "tree" tomato in advertisements and catalogues look very nice and tempting, but the reader should not be led to take the variety for a tree tomato. Naturally it has the spreading bush form of the other vigorous growing sorts, and the tree shape has to be given to it by pruning and tying to a tall stake. Mr. Mansfield comments on my advice in January 1st issue, as follows:

"It is all right to start the plants early and to force them rapidly, but it is all wrong to set them out-doors quite early if the weather be rough and cold. The tomato must have warm weather. It is far better for the plants to be kept in the greenhouse until the weather has become quite warm. The plants should then be about twenty-four inches high, with stalks one half an inch thick, and all ready for bloom. Here in Wisconsin we can set them about May 20th. Leave plenty of soil on the roots when setting them; tie the plants to stakes as soon as set and give plenty of water. If the ground is rich and well exposed to the sun, and if you will not let the plants suffer from lack of water, you may expect results that will please you."

In conclusion let me state distinctly and emphatically that I do not recommend this variety for general planting, either for market, canning or home use. It is an interesting thing and of value to the amateur. The Dwarf Champion is yet the nearest serviceable tree tomato; but it also needs staking if to be kept in upright form. None of the true tree tomatoes, like French Upright, or Station, etc., have any practical value that I have been able to discover, and I have grown them annually for about half a dozen years.

BUSH LIMAS.—I cannot refrain from once more saying a good word for the bush Lima. This, of course, really means Henderson's, for the others are yet too high-priced to be grown for eating purposes. Mr. J. Q. A. Clowes, M. D., another Ohio subscriber, speaks of Henderson's Bush Lima as follows:

"Two years ago I planted twenty-five seeds, which came up and grew nicely; but I soon found that even the cut-worms had discovered that bush Limas are better flavored than other sorts, so I only saved five plants, which gave me seed enough for the following year's planting; these gave me two crops of as good Limas as I have ever eaten. It is a grand addition to the list of beans. We are no more obliged to haul a wagon-load of bean-poles, and the early fall frosts have no more terror for us."

I started two years ago with a package or two; now I have seed enough that I can plant a large patch; and I plant so thickly in the rows that cut-worms might take half of the plants without doing me any harm. If gaps occur I take up some of the plants where too thick and fill out; they transplant readily. Let no one neglect to plant some of these fine bush Limas.

GOOD CABBAGE SEED.—Seed growing has become a science. People nowadays want good vegetables and some assurance that the seed they buy will bring them good vegetables. Formerly, the home gardener either raised his own seeds, or picked up here and there, among friends and neighbors, what he thought he needed or could get. Everything then was hit or miss. If the seed produced anything, all right; if not, it did not matter, for, indeed

the expectations at that time were not very exalted. Now, things have changed. We anticipate success, and grumble if our expectations are not realized. This change is due not only to the improvement of varieties, but also to the care and skill which our competing seedsmen exercise in the production and selection of seeds. The seedsmen failing to send out pedigree seed—seed improved by long-continued, careful selection of seed stalk—would soon lose his reputation and his trade. Old gardeners who continue to grow their own seed, may continue to sow cabbage seeds grown from stumps, or onion seed grown from imperfect or immature bulbs, season after season; but the man who buys his seed from any of our seedsmen of known reliability and respectability, will get cabbage seed from stock grown on the center shoot, or onion seed produced from perfect bulbs.

Fortunately, the list of reliable seedsmen is a large one and there is no need of giving names, for they are all found, at this time of the year, in the advertising columns of FARM AND FIRESIDE. Only when it comes to novelties, we must take the description as given in the catalogues, not with one grain, but rather a whole number of "grains of salt."

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

ELEMENTS WITHDRAWN BY FRUIT CROPS.

Prof. E. W. Hilgard, in California Experiment Station Bulletin No. 88.

The subjoined table gives some insight into the amounts removed from the soil by some of the chief fruit crops, of nitrogen, potash, phosphoric acid and lime; these being, according to all experience, the only ones of which the replacement need ordinarily be considered in fertilization. These amounts are expressed both with reference to 1,000 pounds of fresh fruit and to what, according to our best information, may be assumed to be a "fair crop" per acre. The latter figure is, of course, liable to great variations and differences of opinion; but by the aid of a little arithmetic each one can calculate for himself the data suitable to his own case or views. The crop assumed in the case of oranges is 325 boxes per acre of fifteen-year-old trees; that of grapes is intended to represent a mean between upland and lowlands.

QUANTITIES OF SOIL INGREDIENTS WITHDRAWN BY VARIOUS FRUIT CROPS.

FRESH FRUIT.	Total ash, lbs.	Potash, lbs.	Phos. acid, lbs.	Nitrogen, lbs.
GRAPES, 1,000 lbs....	8.8	5.0	1.52	1.70
Crop of 10,000 lbs. per acre.....		50.0	15.20	17.00
ORANGES, (seedless), 1,000 lbs. Crop of 20,000 lbs. per acre.....	6.07	2.78	.67	2.69
PEARS, 1,000 lbs. Crop of 20,000 lbs. per acre.....	3.3	1.8	.5	.6
PLUMS, 10,000 lbs. Crop of 30,000 lbs. per acre.....	2.9	1.72	.44	4.2
APPLES, 1,000 lbs. Crop of 20,000 lbs. per acre.....	2.2	.80	.03	.6
		16.00	6.00	12.0

It will be seen that for equal weights of these fruits, grapes take from the soil by far the largest amount of mineral matter, of which nearly five ninths is potash; they also carry off the largest amount of phosphoric acid. For seedless grapes the latter item would, however, be considerably smaller.

Next in the drain of total mineral matter from the soil stands the orange; it also draws heavily on the potash, and also upon the nitrogen of the soil, but less than the grape upon phosphoric acid; this independently of the seeds, the analysis having been referred to seedless fruit. Seed-bearing (seedling) fruit would draw more heavily both on phosphoric acid and nitrogen.

Pears come next as regards total mineral matter, but draw quite lightly on nitrogen.

Plums (including prunes) are conspicuous chiefly for their heavy draught on the nitrogen of the soil, greatly exceeding in that respect the orange for equal weights, and enormously for an (assumed) average crop.

The difference between apples and pears in respect to soil exhaustion for an equal weight of fruit is quite striking, the amount of potash in apples being less than half, the phosphoric acid only a trifle over half as much as in the pear, while nitro-

gen is equal in both and quite low as compared to the orange, which has over four times as much, and must therefore be accounted relatively much more nourishing to man, as well as more exhausting to the soil.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Japan Persimmon.—H. V. S., White House, N. J. The Japan persimmon will not flourish as far north as any part of New Jersey, at least without protection. The trees can be obtained of most of the nurserymen. You might try J. C. Lovett & Co., Little Silver, New Jersey. They can be grafted on the native persimmon.

Fighting the Plum Curculio.—T. L. B., Boulder, Colo., writes: "Prof. A. J. Cook, in the January 1st number, recommends to plant plum trees among the others for protection. Would it not be raising a more vigorous brood of curculios for the next season if they were neglected, as they do better on the plum?"

REPLY:—The plum trees used as a harbor for the curculio should never be neglected, but should be regularly jarred and the insects gathered and destroyed.

American Chestnut and Chinquapin.—J. C. Iron, Ill., writes: "1. How far apart must the American sweet chestnut and the dwarf chinquapin chestnut be set in an orchard? 2. Where can I get the dwarf chinquapin?"

REPLY:—I should think the chestnut ought to be at least twenty-five feet apart, and the chinquapin about fifteen feet apart. 2. The chinquapin can be obtained of any of the larger nurserymen, especially of those of Maryland and Virginia.

Land for Small Fruits.—W. R. R., Madrid, Iowa, writes: "My land is clay loam. When the season is dry it does not produce well. Strawberries and raspberries winter-kill. What is the cause?"

REPLY:—You have not told us how you cultivate your small fruit; whether you mulch thoroughly in winter, or whether your land is wet or dry. All these are points that would have to be considered before answering you satisfactorily. I think if your land is good, or even fair corn land, it will produce strawberries and raspberries in abundance, if they have proper care. You write as if your trouble was in winter-killing alone. Such would be very apt to be the case on a clay loam, unless the fruit was heavily mulched. If the land has standing water on it in winter, it should be ridged and the fruit grown on the ridges to keep it dry. If the raspberries winter-kill, they should be laid down and covered in winter with soil or mulch. I would mulch all the land in small fruit on a place like yours.

Peach and Plum Pits.—S. F. H., Plymouth, Mich., writes: "1. Where can I get peach pits which will not be in danger of yellows? 2. Are some kinds more sure of producing same kind of peaches than others? 3. What kinds? 4. Will plums grown from pits be same as original? 5. What kind of plums are considered most hardy? 6. Are Prunus simoni, advertised by Ontario nurseries, Geneva, N. Y., of any account? 7. Are peach trees sown from pits more hardy than budded ones?"

REPLY:—1. Probably the trees of the mountains of Tennessee are as free from the disease as those of any known section. 2. Yes; but the only certain way to propagate the best kinds is by budding. 3. Pits from most of the good varieties produce trees of good fruit. The Fleenor cling is a peach well known in some parts of Indiana, and is reported on good authority to come true from seed. The Wager and Morris' White are reported to come true from seed, but it is very doubtful if they are like the specimens of that name. 4. No; they vary from the original or parent tree, even more than peaches. 5. The most hardy, cultivated kinds of plums are the De Soto, Forest Garden and Weaver; but their quality is not so good as many varieties that are more tender. 6. Prunus simoni is not very hardy, and is not a desirable variety. 7. They are generally considered to be so, but there is room to doubt if they are budded and strong, healthy stocks.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

EST OF ALL BARNARD'S TRUE TO NAME TESTED SEEDS. URE TO PLEASE

Complete assortment of Flower, Vegetable and Farm Seeds. Garden Tools, Etc. Send for illustrated catalogue. W. W. BARNARD & CO. (Successors to Hiram Shiley & Co.) 6 & 8 N. Clark-st. Chicago.



IPOMEA PANDURATA, HARDY DAY-BLOOMING MOON FLOWER. Grows from bulbs. Lives on all winter. Increases in size and beauty each year. Blooms night and day. The flowers are six inches across, and very fragrant.

RED RIDING-HOOD PANSY. Most beautiful of this popular flower. Large size, deep red color. Hazel eye, edged with shining gold.

Z. HAAGEANA fl. pl. (GOLDEN CLOTH.) A beautiful shrubby plant two feet high. A mass of bright golden flowers from June to December.



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Speirs' All Metal Portable Force Pump and Sprayer. Best, cheapest, durable, well made, latest patent, May, 1890. Puts out fires, sprinkles lawns, streets, gardens, greenhouses, washes wagons, windows, etc. Clears dries in pipes. Used as cattle syringe. Controls swarming bees. Balls out boats. Whitewashes hen houses. Easily carried as umbrella.

Sprays Fruit Trees. The price of pump saved in one season on a single tree. Sprays vines, trees, plants, shrubs, etc. Send 2 references. Your name, address, name of express company, promise to try to sell. Send 10 cents stamps or silver (to help pay printing, this advt. etc.) No postal answered. To those who comply with all conditions we send complete pump and attachments. If you want two complete pumps and attachments send \$2.00. If you don't want agency send \$2.00 for sample. Circulars free. A. B. SPEIRS, B. 46, North Windham, Maine.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammon, New Jersey.

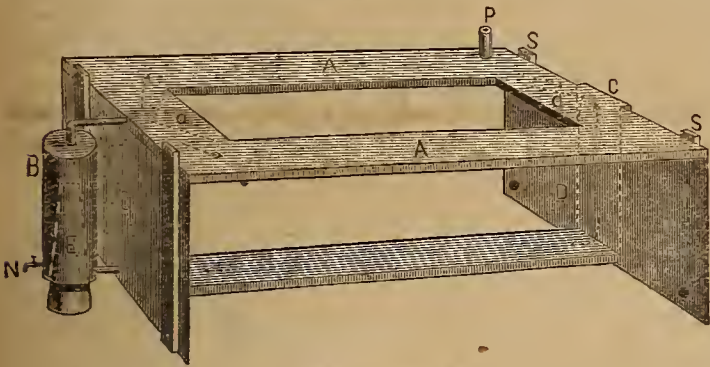
PALMER'S INCUBATOR.

An incubator holding 250 eggs is planned by Mr. D. M. Palmer, N. Y. The tank is 42 inches long, 28 inches wide and 12 inches deep outside. The plan given simply shows the tank and its arrangement as it comes from the plumber's, ready for the case. To complete the incubator, the tank and parts are enclosed with two thicknesses of $\frac{3}{8}$ -inch, matched boards, having four layers of sheathing paper between them. Legs can be added if preferred. The tops of the small ventilating tubes are kept closed the last four days of the hatch by movable plates on top. These tubes are made of strips of galvanized wire, $3\frac{1}{2}$ inches wide and $1\frac{1}{2}$ inch longer than the inside depth of the machine. Fold them together, cut a small piece from one side of the bottom end, punch a hole near the bottom of the end pieces of the machine (as in the illustration), about 3 inches from the corners, and then solder the tubes on the outside of the ends, over the holes. This gives the ventilation from the bottom.

The boiler is made of copper, the connecting pipes to tank being one inch in diameter. The cost of the tank and appurtenances is about \$15, lumber \$6, nails, glass, hinges, screws, etc., about \$2.50.

There is a regulating arrangement that may be attached, consisting of a thermostat battery and motor, which costs about \$10.50. The motor turns the flame up or down as required and is very reliable, having also an alarm bell. It also shuts and opens the ventilator and has absolute control of the heat.

In the cut the boiler (B) is 5 inches in diameter and 14 inches long. The re-



PALMER'S INCUBATOR.

turn tank (C) is 7 inches wide and $\frac{3}{4}$ inches deep. The end pieces (D D) are each 29 $\frac{1}{2}$ inches long and 13 inches wide and should reach to the top edge of the tank, which is made of galvanized sheet-iron (end pieces and tank), and the ventilating tubes (S S S S) are $\frac{1}{2} \times 1$ inch and 14 inches long. The strips to guide the flow of water in the tank are shown (a a), while the dotted lines (E) in boiler, show the position of the heating flue. The pipe (P) is used to fill the tank with water. The holes through the bottom edges of the end piece (O O) are to lower the ends of the ventilating tubes. N is the faucet to draw off the water. A is the top tank, 7 inches wide and $\frac{3}{4}$ inch deep.

SCATTER AIR-SLACKED LIME.

Intimately mix a gill of crude carbolic acid with a quart of dry, air-slacked lime; then mix this quart with two pecks of lime. Dust the dry lime over every part of the poultry-house, on the walls, in the nests, over the roosts and over the yards. It will be found an excellent disinfectant and will do more to destroy the germs of disease, and with as little cost, than anything else that can be tried.

DEAFNESS CAN'T BE CURED

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that we cannot cure by taking Hall's Catarrh Cure, Send for circulars, free.

J. J. CHENEY & CO., Toledo, O.
Sold by druggists, 75 cents.

HARD OR SOFT FOOD.

Experience shows that hard food is better than soft food for poultry, not that it contains more nutrition, but for the reason that when soft food is given the hens are tempted to eat a larger proportion than should be the case. The giving of soft food leads to overfeeding and impairs the digestion. It also supplies the wants of the fowl more readily than hard food, and so completely satisfies it that the inducement to work and scratch (so essential to health and the thrift of the fowl) is lessened. Then, there is the fact that when giving soft food the poultryman, by mixing several kinds, is liable to give more of one kind than may be needed, while with hard grains the fowls have a greater privilege of selection of that which they prefer; but with mixed soft food they must eat everything of which it is composed—all or none—and thereby surfeit themselves. It is proper to give soft food, so as to feed some needed substances, but we believe three times a week sufficient. Give whole grain, and scatter it far and wide, or mix it with litter, thus compelling each hen to hunt and scratch for all she receives, which will keep her in health and promote egg production.

WHY THEY DO NOT LAY.

Readers write us and state that with the hens in full health, combs bright and indicating vigor, feed given regularly, houses kept clean and everything kept favorable, no eggs are received and they ask: "Why do not the hens lay?" It would be difficult to attempt to give a reason, or reasons. No two flocks are alike; breeds differ, conditions vary and even individual characteristics have no relation to each other. Overfeeding is the most fruitful, and lack of exercise comes next. The great gray lice that prey on the skin of the heads and necks, and which cannot be seen unless by a close search, work as industriously in winter as in summer. A small crack in the wall of the poultry-house, or a top ventilator, that permits the fowls to take cold from draughts, will cause a loss of eggs. We have found, however, that fowls are mostly too fat. They may not appear so, and some will not admit the fact, but when killed and dressed for the table, the result of heavy feeding becomes apparent and the object should be to diet the fowls, not to reduce them to a starvation point, but to a condition for work.

WHAT IS ROUP.

Swelled heads, closed eyes, hoarse breathing, sneezing, canker mouth, drooping without apparent cause and wasting away gradually, are all indications of some form of roup. Roup is a term applied to nearly all diseases of the lungs and throat, but there are many kinds of roup. It sometimes results in scrofula lumps, abscesses and sores following it. In its contagious form there is a very foul odor discernable. There is no cure for some kinds of roup and it is cheaper to kill all the hens, disinfect and begin anew. For some forms a mixture of one part spirits of turpentine and three parts sweet oil, anointing the head and face with a few drops daily, with ten drops down the throat, is excellent. A tablespoonful of chlorate of potash in each quart of drinking water is also a good remedy.

LEG WEAKNESS.

At this season leg weakness in fowls and also with chicks results, and it gives much annoyance to those who do not know the cause. When a hen is apparently lame and cannot stand on her legs, remove her at once from the yard containing the male. This difficulty is more general in spring than at any other time. When little chicks have leg weakness it may be due to dampness, lack of warmth and also lack of work. It is important that little chicks scratch and keep in exercise.

WHOLE CORN.

Whole corn is better than corn meal. It gives better results with Leghorns and other small breeds, than with Brahmas and large fowls, as the former is more ac-

tive, while the latter takes on fat readily. Though lacking in the mineral elements, for some cause unexplained, corn has given good results and reports in its favor are very satisfactory and encouraging.

HOW MANY MALES.

One male with ten hens and one drake with five ducks is the proper proportion. If two or three males are together in the same yard, they will quarrel and the whole be useless. If a number of males are kept they should be on a range and never closely confined together.

INQUIRIES ANSWERED.

Packing Eggs.—M. H., Cooper, Iowa. "Which is the best way of packing eggs for home use?"

REPLY:—See reply to G. W. D.

Poultry-house.—J. A., Dallas Center, Iowa. "How large a house should I build for 100 hens?"

REPLY:—A house 10x60 feet, divided into four apartments, would be a convenient size.

Preserving Eggs.—G. W. D., Clifford. "What is the best formula for preserving eggs, other than pickling?"

REPLY:—Keep them in a cool place, on racks, and turn them half over twice a week. No packing is necessary.

Marking Turkeys.—Mrs. W. E. T., Phoenix, Arizona. "Please give the best method of marking turkeys."

REPLY:—It can be done by punching holes in the web of the feet, cutting the piece out. Markers are sold for that purpose. Leg-bands, numbered, are also used by some.

Probably Overfeeding.—S. S., Bentonville, Indiana. "Our hens have all the range they desire, good house, plenty of corn, oats, boiled mess, and appear healthy, but we have found five dead."

REPLY:—It may be poison from something eaten, or it may be from apoplexy, due to overfeeding and the hens in a very fat condition.

Eggs for Hatching.—Mrs. W. F., Boswell, Indiana. "1. How long will eggs keep for hatching if packed in boxes or baskets, with lid fastened on and inverted twice a week. 2. Will it spoil eggs for hatching if they touch each other?"

REPLY:—1. If kept in a cool place they may be retained for six weeks. 2. If they are fresh it will do no harm for them to touch.

Salicylic Acid for Preserving Eggs.—C. N. K., East Taunton, Mass. "How would a

EGGS \$1 per setting, 14 varieties. Write for circular now. Ohio Poultry Yards, Sherwood, Ohio.

EGGS FOR SALE CHEAP from 20 varieties of choice stock. Send stamp for 24 page catalogue. J. S. SHOEMAKER, Dakota, Ill.

EGGS from fine Minorcas, Bk Spanish, P. Rocks, Red Caps, Polish, Dominiques, Leghorns, Pekin Ducks, etc. per setting 3 eggs, \$2.50. J. H. Carr, Upper Black Eddy, Pa.

EGGS and FOWLS FOR SALE From 50 Varieties. Largest Range in the West. My fowls won over 800 first and 2nd prizes at 7 State shows last fall. For full description send three one-cent stamps and get the finest illustrated catalogue out, 8x11, 32 pages. CHAS GAMMENDINGER, COLUMBUS, O.

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MAKE HENS LAY LIKE
Sheridan's Condition Powder!
It is absolutely pure. Highly concentrated. In quantity it costs less than a tenth of a cent a day. Strictly a medicine. Prevents and cures all diseases. Good for young chicks. Worth more than gold when hens moult. "One large hen saved me \$50. send six for \$5 to prevent roup," says a customer. If you can't get it send us 50 cents for two packages, five \$1. A 2-14 pound can \$1.20 post-paid; 5 cans \$5, express paid. "THE BEST POULTRY FAVORITE," sample copy free. Poultry Raising Guide free with \$1 orders or more. I. S. JOHNSON & Co., Boston, Mass.

solution of salicylic acid do to preserve eggs in, from May to December, and please state for which crop poultry manure is most valuable?"

REPLY:—It will preserve them, but no solution will keep them so as to render them equal to fresh eggs. Poultry droppings are excellent for all kinds of garden crops and especially for onions.

Hereditary Disease.—P. S. W., Wahoo, Neb. "My fowls were apparently healthy, have free range, and are well cared for, with no appearance of deformity before this season. Of fifty raised this season, three males and a pullet have unnatural enlargement of the bone of the back, at the junction of the thigh, also diseased liver and sores inside of the back."

REPLY:—It is of a scrofulous tendency and perhaps hereditary, being transmitted from some member of the flock not showing the disease, which may have resulted from roup in the first place.

Drooping Hens.—Mrs. K. Z., Plaza, Wash. "What is the matter with my chickens? Some of my hens eat as though nothing was the matter with them, and yet they will get so poor and keep on getting poorer, until they die. Sometimes they will live a month and sometimes longer. They have a good range, plenty to eat and spring water to drink, with plenty of gravel?"

REPLY:—It may be due to the work of the large gray lice, which prey on the heads and necks, close to the skin, though roup will often give the same symptoms. Anoint the head well, twice a week, with a mixture of one part spirits of turpentine and four parts sweet oil, mixed.

CORRESPONDENCE.

EARLY CHICKS.—I wish to say a few words to those who anticipate raising early chicks on a small scale, with but little outlay. First, it is desirable that the eggs be put under two or three hens at the same time, that the chicks may all be given to one hen. Then get a light store-box, of convenient size, say thirty inches in length. Place the box on its side and if you have no window-sash that you can use for a door, you can prepare a door with one pane of glass, so arranged as to admit sunlight and keep out the cold winds. Put carpet or something in the box to keep the chicks' feet dry and warm. Clean out the box often, using dry earth to keep it fresh. Frequently put in hay seed or chaff, with a little wheat, to cause them to exercise. It is well to put the hen out each morning and give her water, at which time water the chicks, that the water may not get spilled in the box. Feed often—corn bread moistened with milk is excellent. If gapes are feared, mix corn meal with milk or water and set it in a warm place over night, that it may sour; feed this to them from the beginning. Last year I began this after one died and lost no more. Always feed on a clean board or pan. At one time last year I had 113 chicks with five hens and nearly all went into the early market. To keep off hawks, put new tin pans on poles.

Palatine, W. Va.

Mrs. B. F. R.

800,000 STRAWBERRY PLANTS. All varieties warranted true. All kinds of Nursery Stock. Catalogue free. J. W. HALL, Marion Station, Md.

100 PER CENT PROFIT GUARANTEED To all who intend to plant Fruit and Ornamental Trees, Shrubs, Vines, Roses, etc., if you will give me your name and P. O. address on postal card directed to J. Hammond, Nurseryman, Geneva, N. Y. Mention this paper when you write.

CHOICE NURSERY STOCK. All the best Old and New varieties. FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, STRAWBERRIES, BLACKBERRIES, RASPBERRIES, and plants of all descriptions. Write us for prices before ordering elsewhere. Descriptive catalogue 10c. Price Lists free. **TEN ASSORTED GRAPES FOR \$1.00.** Elizabeth Nursery Co., Elizabeth, N. J. Be sure to mention this paper when you write.

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If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

EXTRACTS FROM CORRESPONDENCE.

FROM NEBRASKA.—Crops were very light last year, but the prospects for this year are good. Cattle are very scarce now. Grain is high and hogs cheap, contrary to the general rule. Rolling prairie, unimproved land, is \$7 per acre; improved, \$8 to \$10; bottom land, from \$15 to \$25. Considering the quality of the land here, these prices should draw the attention of the tied-down renters that are toiling under hard masters. The soil is very rich along all small streams.

Sweetwater, Neb.

H. A. B.

FROM IOWA.—This is a great dairy country, and we claim Linn county as one of the banner counties of the state in the production of butter and cheese. A great many hogs are raised and slaughtered here in our own county. Cedar Rapids having one of the largest packing-houses in the country. We had fairly good crops the past season, of most farm products. I have lived in Iowa twenty-six years and never knew a failure of crops in old Linn. Small fruits do well here, but apples are not to be depended on. Vegetables do well.

Springville, Iowa.

E. H.

FROM KANSAS.—Wichita is one of the best counties in the state for stock. Two streams, Beaver and White creeks, run through the county. There is plenty of wild grass for horses, cattle and sheep, and they thrive the year around, except when there is snow on the ground—and it seldom ever snows to cover the grass over three days at a time. Wheat was a good crop last year, and it is selling for sixty-five cents a bushel. Oats was an average crop, but potatoes failed. Land is very dull sale here now; it sells at about \$1,000 a quarter section, except when near the county seat.

Selkirk, Kan.

J. T. L.

FROM WASHINGTON.—We are having a very pleasant winter here. Wild flowers are in bloom, among them the little flower known as "Sweet-harbing of spring." All fall-sown crops are looking remarkably well, and farmers are looking forward to another bountiful harvest. We have never had a failure of crops here. We have been able only to chronicle one blizzard in twenty-seven years, and no cyclone. We know of nothing that can be raised in our old home state, Ohio, that would not produce a fair crop here. Klickitat county has homes of fair average land, good water and a healthy climate for thousands.

T. M. W.

Lyle, Washington.

FROM IDAHO.—I live in what is called the Big Potlach country, derived from an Indian name. The soil here is a mineral deposit, from two to four feet deep, very productive, yielding of wheat from 30 to 60 bushels per acre; barley, 60 and upward; flax, 15 to 30 per acre; and oats, 70 bushels per acre. We raise corn and all kinds of vegetables in profusion. I think I can beat "Joseph" on onions here. We raise fruit, such as apples, pears, plums, prunes, apricots, grapes and all of the smaller fruits. We have a good climate. Talk about importing barley into these United States! Give us a steady market for barley and we will surprise you.

S. S.

Leland, Idaho.

FROM WEST VIRGINIA.—This state is small, but her resources promise to make her great in the near future. She has an abundance of timber, coal and oil lands as yet undeveloped. Harrison county is our best coal district. As for farming, the Ohio bottoms are unequalled. Blennerhassett Island, one mile below Parkersburg, and containing about 300 acres, is almost invaluable for farming and gardening. As a stock country, West Virginia is advancing very rapidly, especially in fine horses. Wheat is 95 cents per bushel; corn, 60 to 70 cents; oats, 60 to 65 cents; meal, 70 cents; bran, \$25 per ton; flour, \$6 per barrel; chop, \$27 per ton; timothy, \$10 per ton; potatoes, \$1 to \$1.25 per bushel; apples, \$6 per barrel; butter, 20 cents per pound; eggs, 23 cents per doz.

Parkersburg, W. Va.

W. J. B. H.

FROM TENNESSEE.—Murfreesboro is a town of five thousand inhabitants, situated exactly in the center of the state, and also in the center of the central basin of middle Tennessee. Its chief exports are corn, wheat, cotton and bacon. Murfreesboro has electric lights, street-cars, two banks, four drug stores, several cotton gins and one railroad—the Nashville, Chattanooga and St. Louis. We need another one to secure cheap freights. Corn is worth 60 cents per bushel; wheat, 95 cents; sweet potatoes, 35 cents; eggs, 15 cents per dozen; hens, 20 cents each; turkeys, 6 cents per pound; hives, 2 cents per pound on foot. Run-down lands are for sale cheap. Cotton has worn much of the land out, but it is not too late to reclaim it; it will grow clover and grasses well. Cotton is the main crop in this county, and it will average about one fifth of a bale to the acre. We want northern capital and people to improve and build up our country. Northern people will receive a cordial welcome here.

E. W. A.

Florence Station, Tenn.

WHERE ARE THE BEST BUGGIES MADE?

The Pioneer Buggy Co., Columbus, Ohio, on receipt of 10 cents, will send you their treatise on the horse, which also answers the above question.

FOR SALE FARMS worth \$4,000.00 for \$1,000.00, owing to crop failure, that in good seasons raise 40 bushels of wheat and 80 bushels of corn per acre. Descriptive list 10 cents. Chas. R. Woolley, Osborne, Kansas.

FROM KENTUCKY.—Calloway county is bounded on the east by the beautiful Tennessee river. A railroad from Paducah, sixty miles from here, passes through Murray, the county seat. We, on the east side of the county, ship by river. We have good shipping facilities, and some of the finest lands in the state. Corn produces from 15 to 50 bushels per acre under our slipshod methods. Tobacco, which is our money crop, makes 1,000 pounds per acre. We have some of the finest tobacco lands in the Union. It is no trouble to make ten-cent tobacco. This is a splendid fruit and vegetable country; but we need good farmers here to get money out of our soil. We have no real farmers here; they make a sort of living by working about four months in the year. There is no reason why an industrious farmer should not get rich here. Good unimproved land can be had at \$5 to \$10 and improved for \$10 to \$20 per acre. We would welcome any honest, industrious farmer. A farmer from one of the more northern states could soon become independent here. We need good farmers, truckers and stock raisers. Cattle do with little feeding. We have a fine climate and good water.

Hamlin, Ky.

F. T.

FROM PENNSYLVANIA.—Lehigh county is a mining country. Iron ore is the most abundant. The ore is dug out and hauled on carts to the washings, which are erected on trestles ten to twenty-five feet high, so that the mud which is washed out will easily flow to a dam made to receive it. The ore comes out of the washery at the highest end, where it runs into a wheelbarrow and is carted into a shute or on a heap, from which it is taken by wagon to the furnace or to a wharf on the railroad. The wages paid at present to miners is ninety cents a day. They have to work eleven hours a day during the summer and in winter as long as they can see. The price of ore is about three dollars per ton, delivered at the furnace. Furnaces are plenty here. Almost every town of importance on the railroad has its furnace. Allentown has the most iron works, several rolling mills, pipe foundries, wire mill, railroad-spike mill, gas-pipe works, lock works and several common iron foundries. In most places where wells are to be dug for washing ore, they cost too much. Water lies too deep. We have wells here worked through solid stone (lime) several hundred feet, costing \$5,000 and more. Some are dug about one hundred feet and then drilled until water is reached.

J. H. M.

Wescosville, Pa.

FROM WYOMING.—Lander is a town of about seven hundred people and is situated in a beautiful little valley in the heart of the Rocky mountains. The main range is about twenty-five miles to the west. This is a farming, stock, mining and petroleum oil country, and is destined to be the Pennsylvania of the west. It is in many respects similar to Colorado, with better prices for farm products, and at present less money invested in farms. Land ranges from three to fifteen dollars per acre, including water right for irrigating same. The nearest railway point at present is Rawlins, one hundred and thirty miles south on the Union Pacific railroad. The price of farm products at present is; wheat and oats, 2½ cents per pound; hay, \$15 to \$25 per ton; potatoes, 4 to 5 cents per pound; onions, 6 cents per pound; cabbages, 6 cents per pound. Lander is the county seat of Fremont county and is a growing business town. We have two flowing oil wells within nine miles of Lander, and plenty of good coal within five miles. Near us is an Indian reservation, with thousands of acres of good land to be opened to settlers some time. Also, about three thousand Indians; but now they are good Indians. We have good water, a perfect climate and a good many things to be thankful for.

E. L. R.

Lander, Wyoming.

FROM VIRGINIA.—Rockingham county is situated in the famous valley of Virginia. It contains 696,059 acres. The average assessed value is \$13 per acre. It is the largest county in the state, and the third wealthiest in the state. Every part of the county is well watered by the Shenandoah river and its numerous tributaries. Rockingham is one of the largest grain producing counties in the state. Our springs are numerous and have a world-renown reputation for their medicinal properties. The universal wealth of this county is very great; iron, copper, lead, coal, oil, marble of many varieties. Limestone in every part of the county. Our minerals are attracting the capitalists of the north; large amounts of money are being put in mineral lands. Harrisonburg is the county seat, and is improving very rapidly; very fine buildings, good streets, water works, electric lights. The United States custom house, that was completed last year, is one of the finest in the state. Rockingham stands at the head, both as to number and character of her schools. The population of Harrisonburg is about 4,000; of the county nearly 33,000, of which 3,500 are colored. There are many small towns in the county. Harrisonburg has "industries," such as tan yard, shoe factory, potteries, wood-working establishments, that employ from 1,200 to 1,500 men and women. The Harrisonburg Land and Improvement Company is negotiating for industries that will employ about 1,500 hands; boiler and machine works, steel plant and cannery. Our minerals are bound to make this a large manufacturing town. It has one of the finest agricultural

counties in the state to back it. Our farms are small compared to some counties in the state. We are very much like Pennsylvania; 150 acres is a big farm here. Land sells from \$25 to \$100 per acre. Rockingham is noted for its good dwellings, barns, fencing, roads and fine horses. Harrisonburg is the greatest horse market in the state. Our climate cannot be excelled. In winter the mercury hardly ever reaches zero. In summer it is very hot when it reaches 90°. Sunstrokes and malaria are unknown to us.

J. C. S.

Harrisonburg, Va.

FROM UTAH.—Sevier county was settled about twenty-five years ago, but was broken up by the Indians. It was resettled about five years later and has grown in population quite rapidly ever since. The Sevier valley is about fifty miles long and will average about seven miles wide running from north-east to south-west, with mountains on each side which almost reach an altitude of perpetual snow. These mountains are covered with grass which furnish good pasture for stock and sheep in summer, and are also covered with timber of various kinds, from the scrub cedar and nut pine, which afford abundance of fuel, to the quaking ash, fur, pine, etc., for poles and excellent saw timber, which furnish building material in abundance. Lumber sells from \$12 to \$20 per 1,000 feet. There is a variety of building rock near at hand. These mountains are also filled with minerals of almost every description, coal, salt, gypsum, iron, lead, copper, silver, gold, alum, sulphur, etc. The Sevier river traverses the valley from south to north; it averages about sixty feet in width and four feet in depth, with a fall of about five feet to the mile. There are canals led out on each side almost the whole distance. The river would be drained but for the seepage and waste water and also mountain streams which replenish it, and afford water from one canal to another. The land is all made from the mountains and varies in color and quality according to the nature of its source. There are quite a number of artesian wells which furnish excellent water in some parts of the valley. Land is worth from \$10 to \$25 per acre and will produce from 20 to 30 bushels of wheat per acre, which is worth 60 cents per bushel; oats 30 to 50 bushels per acre, worth 1½ cents per pound; potatoes 50 to 75 bushels per acre, worth 33 cents per bushel; alfalfa 5 tons per acre, 3 cuttings; timothy and red top 2½ tons per acre, worth \$4 to \$6 per ton. Corn is not a staple crop here, but does well if attended well. All kinds of fruit which are adapted to a moderate climate do well. Cows are worth \$20; horses, \$60 to \$100; sheep, \$2.50 per head. We have a good school system. The people are generally a moral class and they have meetings and Sunday-schools in every town. Richfield is the county seat. There are chances for people of all professions and trades. Thousands can make good homes in this county; wages run from \$1 to \$1.50 per day for common labor, and mechanics command good wages the year round.

J. S. G.

Sigurd, Sevier county, Utah.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Berry Boxes.—W. L. T., Attica, Ind. You can get berry boxes of the Berlin Fruit Box Co., Berlin Heights, Ohio.

Journal on Carpentering.—G. U., Economy, Pa. *Carpentry and Building*, 96-102 Reade St., New York, is probably what you want.

Cranberry Plants.—E. A. W., Crescent City, Cal. You can get cranberry plants of the Northern and north-western nurserymen who advertise in this paper.

Cotton-seed Meal.—Several inquirers wish to know where cotton-seed meal can be obtained. Those who have it for sale should advertise in the northern papers.

Largest Onion.—G. P., Montezano, Wash., asks: "Which is the largest onion for a long, cool season?"

REPLY:—The Prizetaker, no doubt.

Dairy Thermometer.—J. R. M., Fort Gaines, Ga. You can obtain a dairy thermometer from any dealer in dairy supplies. Send to Vermont Farm Machine Co., Bellows Falls, Vermont.

Book on Floriculture.—J. D. D., Tompkins Cove, N. Y., writes for a book on the care and culture of house plants. We recommend "Winter Greenery," price \$1., published by Orange Judd Co., N. Y.

Osage Orange Hedge Fence.—R. H. S., Glenville, Neb., asks: "What is the best time of the year to lay Osage orange hedge fence?"

REPLY:—In the spring, before it has leaved out, is the time the work is usually done.

Coleridge—Emerson.—Mrs. McM., Waukegan, Manitoba, writes: "When did the poet Coleridge live? In what year did Emerson die?"

REPLY:—Coleridge lived from 1772 to 1834. Emerson died in 1882.

New Ground for Onions.—D. B., Valley City, Ind., asks how new ground would do for onion culture.

REPLY BY JOSEPH:—Any ground that is reasonably free from weed seeds and in good fertility, can be used to advantage, provided, however, the surface can be made smooth and even and mellow.

Too Much Water.—L. S. M., Montana, writes: "Cabbages grown in this section have a tendency to run to leaves and make very small heads, and onions have a tendency to run to top, if irrigated two or three times. What can be done?"

REPLY BY JOSEPH:—The trouble, evidently, is the overabundant application of water. Irrigate less freely. Onions especially are liable to act in just the way complained of if too much water is given.

Best Melons.—C. R. B., Henrietta, Texas, asks which is the best and earliest variety of cantaloupe and watermelon for his section.

REPLY BY JOSEPH:—We will have to leave it to some one in the inquirer's own vicinity or state to tell us what varieties are best for that section. I find the Emerald Gem to be earliest and best, but also about the smallest of the musk varieties; and the Vick's Early the earliest of the watermelons that are worth growing.

Nitrate of Soda for Early Vegetables.—A. T. asks: "How is nitrate of soda used for melons, tomatoes and other crops?"

REPLY BY JOSEPH:—For tomatoes, if used at all, it should be applied at the time the plants are set in open ground, a small handful to the plant, scattered in a radius of a foot or less. I have noticed little or no effect of application to melons. The best results from nitrate of soda are usually obtained with onions, radishes, cabbages, celery plants, asparagus, etc., and especially in early spring.

Millet.—G. C. D., Bowelle, South Dak., asks: "Is ground millet seed injurious feed for horses?"

REPLY:—Millet is supposed to bring on disorders of the kidneys if fed in large quantities. There is a prejudice against millet or a notion that it is injurious, which we do not believe well founded. It is a rich food and should be fed in moderate quantities. When fed properly we do not think there is any danger. Overfeeding corn is equally dangerous.

Raising Celery Plants.—D. W., Pottsville, Pa., writes: "When is the best time to plant celery seed in a hot-bed, and how warm should the hot-bed be kept?"

REPLY:—There is no need of using a hot-bed at all. Early in the spring prepare a fine, mellow seed bed in very rich garden soil. Sow the seed in shallow drills about one foot apart. Firm the soil with the feet. Thin the plants, and keep the soil loose and mellow and free from weeds. Mowing off the tops of the plants once or twice will make stocky plants.

Renewing Clover Sod.—C. C. L., Old Fort, N. C., writes: "I have a piece of level, rather loamy land, with enough sand in its composition to make it work nicely, and it has been in clover two years up to next spring. It has been slightly tramped by a calf being kept on it last fall. Would a coultter, run through the patch, about a foot between spaces, injure or be a benefit to the clover? The coultter would be something like an inch-thick iron bar run edgewise, having a three-inch foot so constructed that the ground is not roughed up much on top, and runs about eight inches deep.

REPLY:—Clover is a biennial plant, and it is seldom profitable to leave the sod more than two years. Do not think your plan would do any good.

Gas Lime.—T. G. B., Clarksburgh, W. Va., asks: "What value has gas lime as a fertilizer? If valuable, in what quantities should it be applied? Is it good to put in the hen-house?"

REPLY BY JOSEPH:—Fresh gas lime contains substances that may prove injurious to the crops (such as sulphide and sulphite of lime). If exposed to the air, these substances become harmless; but the whole substance, then, is nothing more than a mixture of carbonate of lime and sulphate of lime (chalk and plaster). Wherever it is advisable to use that, you may use gas lime that has been well aired for a time. The fresh gas lime may be safely used in the hen-house, and perhaps to good advantage.

Chufas—Artichokes.—W. J., McGregor, Ind. Chufas, or "grass nuts," grow just under the surface of the ground and are readily found and greedily eaten by hogs. They are said to be profitably raised in the South for feeding hogs. The seed catalogues will give

you directions for culture. You can get them, and artichokes also, from the seedsmen who advertise in this paper. Plant and cultivate the latter just about as you would potatoes. They are very productive, yielding several hundred bushels per acre. Hogs are fond of them, and will dig the artichokes for themselves. Turn them in about the middle of September.

Nitrate of Soda for Wheat.—T. Y. B., Allenwood, Pa., asks: "Will it pay to put nitrate of soda on wheat in the spring? How much should be applied and when? Where can it be bought and what does it cost?"

REPLY BY JOSEPH:—Nitrate of soda is at least worth a trial for wheat. Put a hundred pounds to the acre, and apply just as soon as the ground has thawed out. It can be bought of any large fertilizer firm near the coast; but prices have greatly advanced on account of the revolution in Chili. We may not be able to get it at much less than \$60 per ton this year, while the usual price for the last few years was only in the vicinity of \$45.

VETERINARY.

Conducted by Dr. H. J. Detmers. Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Stringhalt.—Mrs. R. F., —, writes: "I have a horse that is stringhalted in hind leg. What can I do for him?"

ANSWER:—Nothing.

Running Sore.—R. W., Clearport, Ohio. First examine and clean the sore, and if you find it deep and ulcerous, dress it twice a day with iodoform, or if it is only superficial, apply two or three times a day a mixture of equal parts of lime water and olive oil.

Warts.—G. B. C., Poynette, Wis., and I. M. P., Cambridge, Neb. Such warts as you describe sometimes disappear without any treatment whatever. For further information I refer you to the answers given to all kinds of "wart" inquiries in nearly every issue of this paper.

Swine Plague.—C. J. O., Ulrich, Mo. Swine plague or so-called hog-cholera cannot be cured by medicines. The only treatment that can do any good consists in good hygiene and strict separation; the latter in the fullest meaning of the word. Of course, separate the healthy animals from the diseased ones, and not vice versa.

Nonsense.—G. K., Billings, Mo., writes: "The men who keep stallions around here tell us, when breeding mares, not to feed them clover or clover hay and other things, saying it prevents the mare from breeding. Is there any truth in the matter?"

ANSWER:—The man who says so either wants to fool you or is a fool himself.

Corns.—C. C. B., Atlanta, Tex. Corns may be caused by any interference with the mechanism of the horse's hoof, consequently by improper shoeing, too much paring of the quarters, and particularly, by allowing the shoes to stay on too long. The treatment consists in cutting out the diseased parts, in protecting the sore spot against undue pressure, and then, in avoiding the causes. In most cases of corns the farmer is much more to blame than the blacksmith.

Bleeding From the Nose.—E. S., Kainier, Oregon, writes: "I have a mare that often bleeds at the nose. She seems to be well and eats heartily. Whenever her nose bleeds she has difficulty in getting her breath."

ANSWER:—Your mare needs a careful examination by a competent person. She either has glanders, or the bleeding, very likely, is caused by a sarcomatous growth (tumor) somewhere in the nasal cavity or in another part of the respiratory passage.

Paralysis.—W. S. B., Blue Springs, Mo., writes: "What is good for paralysis in horses? I have a filly that was taken last May. She was so bad then that she could not get up when she was down. She is better now and can get around very well. Will she outgrow it? She will be two years old next spring."

ANSWER:—Paralysis may have various causes, and in individual cases the treatment must be adapted to its cause and to the peculiarities of the case. There is no specific that can be applied in all cases.

Chronic Mastitis.—A. H. D., Westerly, R. I., writes: "I have a cow six years old, which for three years has given me much trouble. Shortly after she begins to make bag, her bag commences to cake or swell, and by the time she calves her bag is in bad shape. I have to work on it a week or two before calving, and longer afterwards. It seems as if it must certainly burst, being as hard as possible for flesh to be. When she is dry she has a small bag, but when in milk she carries a very large one. Is there any preventive for this?"

ANSWER:—You surely cannot accomplish anything by giving medicines. If good hygienic treatment and regular and frequent milkings are insufficient, the best you can do will be to fatten the animal and send her to the butcher.

Blood-Poisoning.—J. G. B., Spencerville, Md., writes: "Several weeks ago my mare appeared suddenly very stiff in the right fore shoulder and very much swelled in the breast and all along the belly. She did not lie down and it was with difficulty she could step at all. I had her rubbed with a liniment made of eggs, turpentine and vinegar. This took the hair off after some time, and she got but very little better. There was a hard, scabby sort of place under the belly, just about where the belly-band comes. Her stiffness has disappeared, but the sore place has increased to about the size of three hands, or nearly so, and looks red and raw in spots; in others has a honey-combed look and seems to run matter. It is not all a clear sore, but in round spots. We have put only clean lard on it."

ANSWER:—I have a faint suspicion that the horse was, for some time, never cleaned where the girth lies, that dirt and mud were allowed to accumulate and to make the skin sore, and that from that sore the blood-poisoning proceeded. Leave off all grease and greasy ointments, have the sores thoroughly cleaned and then dress them twice a day, with a good antiseptic—iodoform, for instance. At the same time see to it that the stable is kept scrupulously clean.

Mange.—M. G. W., East Sandy, Pennsylvania. Mange is easily enough cured, if only the application of the remedy or remedies is a thorough one, and the necessary precautions to prevent a reappearance of the disease, by killing or destroying all the mange-mites, wherever they have been deposited, are taken. A good wash with a tobacco decoction, re-

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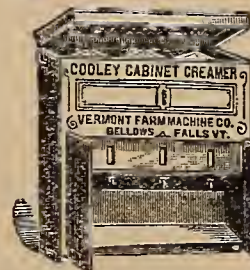
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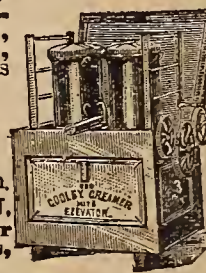
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peated two or three times, at intervals of five days, will surely accomplish a cure, particularly if before the first application all the scabs and crusts are removed by a good wash with soap and warm water. At the same time, or rather each time a wash is applied to the animal, the premises where the latter is kept, and also the stable utensils, harness, blankets, etc., must be thoroughly cleaned and disinfected. If the latter is not done, the disease will, sooner or later, surely make its reappearance. You probably will succeed best if you entrust the superintendence of the treatment to a competent veterinarian.

Wants to Feed Boiled Potatoes.—J. C. W., South Sudbury, Mass., writes: "I am now feeding meal and shorts, one quart each, morning and night and two quarts of oats at noon, to a driving mare, sixteen years old, that is used very little. Have always moistened or scalded the meal and shorts. Would it be better to feed them dry, and if so, why? Would boiled potatoes be injurious to a horse, if fed regularly, with grain, twice a day, one quart at a feed?"

ANSWER:—Good potatoes constitute at present a very expensive food, in fact costs much more than their nutrient value amounts to, and after all are a poor substitute for grain, especially for an old horse, and damaged or poor potatoes are injurious. Oats are much better. If your mare is used to moistened food, you will have to continue the moistening of the meal and shorts.

Milk Sand.—C. B. M., East Branch, N. Y., writes: "I have a young cow that has kernels or crystals in her teats, one of which I enclose herewith. They are loose, and obeying the force of gravity, drop to the bottom, closing the orifice of the teat, thereby rendering it impossible to milk her in the usual way. There does not seem to be much inflammation of the udder, only secondary, and the treatment for garget does not avail."

ANSWER:—Milk sand and concretions are sometimes produced if the cows receive food too rich in mineral substances, lime salts especially. Their formation is also promoted if the milk is allowed to remain too long in the milk systems and lactiferous canals. The remedy, therefore, consists in frequent milking, and in avoiding food too rich in lime salts; bran, for instance. Very hard water, too, should be avoided. There is no way to remove the sand except by milking.

Discharge From the Vagina—A Stunted Pig.—R. A. W., —, writes: "(1) What shall I do with a cow that discharges a jelly-like substance with occasional spots of blood, sometimes bloody discharges, or mucous with liver-colored spots. She calved three weeks ago. Seems well; milks well. (2) What can be done for eight-months-old pigs which do not thrive. The feed has been bran and middlings, and of late, lots of uncooked sweet potatoes. They have had liberty all summer in a roomy yard."

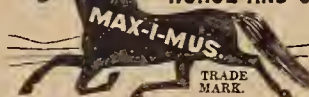
ANSWER:—(1) Your cow, probably, has not cleaned. If such is the case, inject first a quart or two of blood-warm water, and then a quart of a blood-warm solution of corrosive sublimate, 1 to 1,500, into the uterus. Repeat this treatment until the offensive discharge ceases. (2) As to your pig, I cannot advise you because I have no means of knowing the cause of its stunted condition. Pigs are frequently in-

festated with intestinal worms, and then, of course, are not thrifty. But there also numerous other causes.

Lameness.—M. W., Lowery's, Cal., writes: "I have a mare quite lame seemingly in the right fore foot. She holds it up often or rests the toe on the ground. In walking she limps on that side but moves much as if both sides were sore or weak. The condition came on gradually whilst working in harness. It does not improve by rest. There are no external marks of injury or swelling or shrinking of parts."

ANSWER:—It is utterly impossible to locate the seat of lameness in a horse without seeing and examining the animal, unless it is a lameness that shows characteristic symptoms and these symptoms are accurately described. I advise you to make a careful examination of the animal's foot, and if you do not find it there, examine the parts immediately above.

NICK'S MAX-I-MUS HORSE AND CATTLE POWDER.



FOR HORSES.—It has no equal for DISTEMPERS, Heaves, Loss of Appetite, Coughs, Fevers, Pink Eye, WOUNDS, Roughness of Hair, etc. FOR CATTLE.—It increases the Quantity and QUALITY of MILK.

FOR CHICKENS.—It has no equal. It makes them lay. For sale by all dealers. Sample package sent prepaid on receipt of price, 25 cents. Send for pamphlet. Address C. W. Nick, Apothecary, Erie, Pa. Mention this paper when you write.

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Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Fireside.

THE BRIGHT SIDE OF THINGS.

There are two sides to every picture,
There are two ways to tell every tale,
And 'tis weak to give in to misfortune,
Though often our efforts may fail.
Shall we not love the smiling of April,
Because of the teardrops it brings?
Oh, this earth would be Paradise nearly,
If we'd look at the bright side of things.

The web of our life is inwoven
With colors—some dark and some gay;
Let us sleep through the night of our sorrow
And awaken when joy brings the day;
Highest upon the hill 'tis the bleakest,
And care haunts the dwelling of kings,
But our lot, if it's lowly, is sheltered—
Let us look at the bright side of things.

Good goes through the world masquerading,
We know it not in its disguise;
What we take for a blank in our folly
May turn out, in time, the chief prize.
Then let hope be our guide and consoler;
'Tis in darkness the nightingale sings;
Christmas comes in the dead of winter;
Let us look at the bright side of things.

THE NUGGET OF GRUB-STAKE GULCH.

BY JAMES OTIS.

CHAPTER VII. A POCKET.

IMMEDIATELY his scruples in regard to going into partnership with Ned Morey had been argued away, Seth was eager to begin the new line of work as mapped out by the firm. He forgot his own dismal forebodings in the gambler's excitement of digging for gold, and all his former disappointments were as if they had never been known.

A few hours previous the appellation of "Hammond's folly" had seemed to him most appropriate; but now he believed more strongly than ever that a large amount of the precious metal would be found in the double claim. He failed to notice that Alice was mentally disturbed, although to Ned it was patent; and on his arrival home would talk of nothing else but the newly laid plans for the future.

"We shall strike a true vein," he repeated over and over again to his sister, and she, who shrank from the promiscuous love-making such as had already been experienced, said fervently:

"I sincerely hope you may not be mistaken, Seth, for there must surely be more inviting camps than St. Julian."

Morey had very little to say on this first evening after the partnership was formed. He fancied that something had occurred to cause Alice uneasiness, and without knowing exactly why, the idea was by no means pleasant.

As a matter of course, the one topic of conversation was regarding the possibilities of the double claim, and even had Alice been so disposed, she did not have a favorable opportunity to speak of Mr. Grant's visit.

On the following morning three men were hired to sink shafts, and the general opinion of the inhabitants of St. Julian was that the tenderfoot had begun to spend his money in an almost criminally foolish manner.

"A baby would have more sense," Mr. Grant said, in a contemptuous tone to one of his customers. "The idea of expectin' to find color anywhere near 'Hammond's folly' is the most ridiculous thing I ever heard of, an' I've knocked 'round the world considerable."

Fortunately for Seth's peace of mind, he did not hear these criticisms. He had invested all his money in the salted claim, and if it failed to produce gold, he would be even worse than a pauper, since Alice depended on him for support.

It must be said, however, that never did he think of expense in regard to her. She was his sister whom he loved dearly, and anything for her comfort or happiness was the same as if he had spent the money in pursuit of his own pleasure. Nevertheless, the fact remained that if the double claim failed to pay expenses, he was without even so much as would be necessary to provide transportation to some other location, and this in itself was sufficient to plunge him into a fever of mingled anticipation and apprehension.

During the week which followed the visit from Mr. Grant, Ned Morey appeared perfectly happy and contented. Never once did he admit the possibility of a failure, although now the partners were under considerable expense, and to Alice's inquiries he invariably replied:

"Don't worry for a single moment. We shall strike it rich some day, and the longer that time is delayed, the more we will have to show for our perseverance."

"I hope so most sincerely; but have you noticed how haggard dear Seth is looking?" she would reply, as if never tiring of hearing Ned say:

"That is because we are coming nearer the golden deposit each day, and you must expect that the strain will tell upon him to a certain degree."

A week elapsed from the day when the part-

ners began work on the double claim, and yet nothing had been seen to encourage them in the undertaking. Apparently, they were as far from finding a deposit of precious metal as on the day when Seth first took possession of his salted property; but Ned had not lost courage. The only uneasiness or annoyance he experienced was owing to the odd manner with which the inhabitants of St. Julian, and more particularly the habitués of the Palace, treated him.

During his first walk about the town everyone had appeared eager to be on friendly terms with him, and this he attributed to the possible fact that they were trying to atone for the slight unpleasantness under the cottonwood tree. Now, however, the miners passed him by as one to be avoided, although he was not conscious of having given offence to a single person.

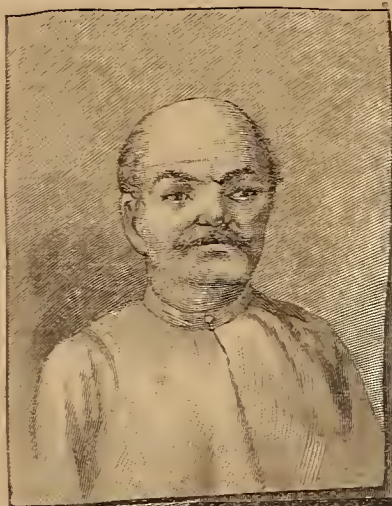
On the afternoon of the seventh day after the proprietor of the Palace had insisted on caring for his horse, the animal was sent to Dick's cottage, with the following curt note fastened to the pommel of the saddle:

"MR. MOREY:—I don't care about havin' strange horses in my corral, for nobody knows how soon a owner may turn up an' try to make trouble.

JOSEPH GRANT, Esq."

"Do you think it is safe to ride before your wound has fully healed?" Alice asked, coming to the door just as Ned finished reading the note.

"I wasn't intending to do anything of the kind; but it would seem as if the proprietor of the Palace had made up his mind that I must do so;" and without thinking of the alarm it might cause, Ned handed her the soiled scrap of paper.



"Can it be possible that they still think you may have stolen the horse?" she asked, her face paling as she read the note.

"That is the meaning the words are intended to convey, and they have evidently been written for the purpose of driving me out of town; but don't be frightened," he added quickly, noting how great was her alarm. "I am not disposed to allow them an opportunity to make much trouble."

"You surely would not think of attempting to defy such lawless men?" And now her agitation was almost painful to witness.

"At all events, I do not intend to run away just yet. Perhaps it would be well to see Seth at once."

"Don't go now. He will be home soon, and it may not be very safe to ride through the town."

"I assure you, Miss Hammond, that there is no especial danger; at least, not yet awhile. Do not be frightened. I will come back with your brother in a few moments, and we will decide whether it is best to take any notice of this note."

Before she could interpose further objections, he was in the saddle, riding swiftly away, while she remained with bated breath, listening for the sounds which would betoken an attack.

No attempt was made to prevent him from going where he pleased. He rode directly past the Palace, on the veranda of which were Mr. Grant and a select circle of friends; but the only demonstrations made were such as might be gathered from scowling glances and certain slight gestures, showing that they were conversing about him. It had been several days since they had returned his salutes, therefore he did not so much as turn his head.

Arriving at the double claim, he was forced to wait some time before seeing his partner, owing to the fact that the latter was in the shaft; and when Seth did finally come to the surface, he exclaimed:

"Hello! Have you heard of the news so soon?"

"Have you any to tell me?"

"I should say I had. The laborers knocked off work a couple of hours ago, positively refusing to remain longer in our employ."

"Were any reasons given?" Ned asked, excitedly.

"I suppose they wanted a loafing spell."

"But did they give any reasons?" Ned persisted.

"Since that was probably the real cause, it doesn't make any difference about the excuse given," Seth replied, evasively.

"To speak more plainly, you don't intend to tell me. Read this note, and then I fancy you will not think it best to conceal anything from me."

Seth glanced at the note hurriedly, looked around to make certain no one was within hearing distance, and then replied slowly:

"There's mischief of some kind brewing. They intend to make you leave the town, I believe."

"That will be rather a difficult task, for I am not frightened so easily. It was because of me that the miners refused to work?"

"That was the sole reason given."

"Why do they want to be rid of me?"

"That is exactly what I have been trying to make out," Seth replied, in a tone of perplexity. "I can't even so much as guess."

For some moments the partners remained silent, each vainly trying to solve the vexing

of what has been discovered in the immediate vicinity."

"Then we will work it alone if the miners refuse to take our money. I am now in condition to do my share of the labor, and we will show the Gulchers that it isn't such an easy matter to scare a fellow."

As he spoke, Ned lifted the pick to prove that he had fully recovered his strength, and struck a vigorous blow at the side of the shaft a short distance above the floor of earth. The iron point tore away a large portion, allowing the strata immediately over it to descend, until there appeared to be great danger they would be buried beneath the crumbling mass.

"Swarm up that rope!" Seth shouted, excitedly. "There is no time to lose, for no one can say how much of this stuff may fall!"

Before Ned could extricate his feet from the loose earth in order to obey—for the bottom of the shaft had been covered to a depth of fifteen or twenty inches—the danger was past. The gravel ceased to fall, and Seth said:

"There is no reason now why we should hurry; for a few seconds it looked as if our expensive hole in the ground would soon be filled up; but everything can be made secure with a timber or two. The next time you propose to show your strength it would be a good idea to work where no great amount of damage can be done."

"I've made rather a poor beginning toward helping you; but the mischief can soon be repaired. If you will get to the surface on that rope, I'll fill the bucket."

"That is the hardest part of the work; therefore, you must attend to the windlass. I'll—"

Seth ceased speaking very suddenly, and leaped toward the opening in the side of the shaft from which the earth had fallen.

"What is the matter now," Ned cried. "Is it necessary to hold that wall up with your hands?"

Seth was silent for several seconds. Then he rose to his feet, trembling like one in an ague fit, and extended his hand, in the palm of which was a dull, yellow mass, bearing a strong resemblance to a rudely-carved Greek cross, measuring about four inches from point to point.

Leaning forward eagerly, not one whit less excited than his companion, Ned whispered:

"Is it—is it—"

"Gold!" Seth shouted, trying to cover the precious lump with his trembling hands, as if afraid others might see it. "That blow of yours, which promised to do so much mischief, was a lucky one for us. We have struck a pocket, and now there is nothing more to be done but pick up the nuggets. We shall surely find more."

Then, hardly conscious of what they did, the two men stood mutely gazing at the dull metal as if it was something sacred, until Ned said with a nervous laugh:

"It is fortunate those miners knocked off work, for now we can keep this a secret."

These words recalled to Seth's mind the fact that the inhabitants of St. Julian had virtually given his partner notice to leave the town and the situation seemed more serious than before. Two hours previous he could have taken his departure joyfully, providing it had been possible to sell the claim; but now both must remain, even at the risk of an encounter with Conestoga Joe and his friends.

"We must decide upon some plan," he whispered. "You can't leave, no matter what they try to do."

"I am certain that I won't," Ned replied stoutly. "It is nearly sunset; let us go home, tell your sister the good news, and talk the matter over."

Seth wrapped the nugget in his handkerchief, placed it in his bosom carefully, and then went up the rope hand over hand, Ned following immediately after.

CHAPTER VIII.

FORMAL NOTICE.

It was necessary Alice should know all that had occurred, and the joy caused by the good news was quickly dispelled by the stand the miners had taken.

"Why they wish to drive him away after all appeared to be so friendly, is something I fail to understand," Seth said, when the excitement of the party had subsided sufficiently to admit of rational conversation. "Are you sure you have said nothing to give offence, Ned?"

"Positive," Morey replied; and then glancing toward Alice, whose cheeks were flaming red, as she began to have a suspicion as to the cause of the sudden enmity, he added, "It won't pay to spend time searching for the reason of the trouble. They will hardly dare to shoot me in cold blood, for there are enough honest men here to prevent them from downright murder."

Seth made no reply. He realized only too

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and for

the cure of all
scrofulous diseases,
the best
remedy is

Ayer's Sarsaparilla
Cures others, will cure you

well how easy it would be to provoke a quarrel when the use of a revolver would be considered justifiable, and felt positive his partner was in no slight danger.

"We will search for the remaining contents of that pocket," Ned continued, as Seth remained silent, "and it looks very much as if we might find more of the same kind."

"Why not sell the claim and buy one somewhere else?" Alice asked. "It would not be difficult to get a good price, since you know gold is there."

"That would be foolish," Ned replied, quickly. "Who can tell but we have struck it very rich? We must take fortune at its flood, Miss Hammond."

"While you two are discussing matters, I'll have a turn around to see if your horse is safe," Seth said, as he went toward the door. "It isn't impossible but that some of these highly respectable inhabitants might run him off."

Since this was only a natural thing for him to do, neither Alice nor Ned interposed any objections, and he closed the door behind him; but instead of going in the direction where the steed had been picketed, he walked rapidly toward the Palace.

Mr. Grant's establishment was literally crowded with customers when Seth entered and tried to make his way toward that portion of the room where the proprietor stood receiving the guests, whose money was the only recommendation to hospitality.

Nearly everyone had a cheery word for Seth as he passed slowly along; but several coupled with it the question:

"When is that tenderfoot goin' to light out?"

To these last Seth made no reply; he had come to the Palace for a special purpose, and could not afford to waste his time on such citizens as had little or no influence. Not until he was in front of Conestoga Joe did Alice's brother come to a standstill, and then the owner of the establishment shouted:

"Well, I'll be blowed if Seth hasn't called to see how we're gettin' along, boys. I 'lowed the tenderfoot had told him he mustn't come where so many coarse men would be found; but now that he is here, we'll show our 'preciation of him. Step up, gentlemen, an' have one with the house in his honor."

Such an invitation was never made in vain to the habitués of the Palace, and each one seemed to consider it necessary to accept with the greatest possible amount of noise. They crowded around Seth with the most extravagant demonstrations of friendship, and he, thinking only of the purpose for which he had come, departed from his usual custom so far as to join them; but the subsequent invitations which poured in from different parts of the room were unheeded, as he said in a low tone to Mr. Grant:

"Joe, I want to talk with you and Bill, but don't care to do it where this crowd can hear every word we say."

"I'll fix that part of it," Mr. Grant replied, affably; and then, without the slightest show of ceremony toward his guests, he elbowed his way into the "office" at the rear of the saloon, where Big Bill and Seth finally succeeded in following.

"What's up?" the proprietor of the establishment asked, when they were "far from the madding crowd." "I kinder 'lowed by the way you spoke, Seth, that you had something serious on your mind."

"So I have, and I want a plain talk with you, whom I believe to be my friends."

"Bet your bottom dollar we are, 'an there won't be any chance of losin'," Bill said, emphatically.

"Then you can have no objections to telling me why all hands are down on Ned Morey without cause. He is my partner, and as such, what concerns him concerns me, and I want to know what has happened. After trying to lynch him, you did the square thing for two or three days, when suddenly his horse is sent back with a note in which he is virtually called a thief, and at the same time those whom I had employed quit work because they will have nothing to do with him."

Bill coughed and looked at Mr. Grant.

Mr. Grant coughed and looked at Bill.

Seth gazed inquiringly from one to the other until the proprietor of the Palace, shifting about uneasily in his seat, finally said, with a pompous manner:

"The amount of the story is, Seth, that we've come to the 'clusion as how it'll be best for St. Julian if the tenderfoot lights out. We don't want them kind of cattle 'round here, an' you oughter know why."

"But I don't," Seth replied, quietly, "and it is for the purpose of learning the exact reason that I came here to-night."

Again did Mr. Grant appear confused, as did Bill also; but the former succeeded, after several attempts, in saying:

"In the first place, we've got to look out for the town, now that the boom has struck us, an' sich as he is likely to hurt business."

"Why? He is a reputable citizen; has money with which to make investments, and is just the kind of a man you need."

"Look here, Seth," and Mr. Grant assumed a fatherly tone. "You've kinder let your feelin's get the best of judgment. Take my word for it, we can't afford to have him here, an' while we set a pile on your sister an' you, he's got to go. We've hinted to him, an' now give you formal notice that there'll be trouble if he's in this 'ere town two weeks from to-day."

"Do you think a man will be driven away after investing his money in land? If you ex-

pect a boom when people are not to be allowed the privilege of holding what they've paid for, you are making a big mistake."

"He bought the claim from a greaser, an' sich bargains don't go. All the boys think the same as we do, so there's no call to say anything more."

"It's an outrage," Seth replied, angrily. "He is the one who has been injured during his stay in this place, and you should try to atone for the disgraceful scene under the big cottonwood. If, however, you insist on this 'formal notice,' as you call it, I will take the warning as a personal matter, and if he is obliged to skip, I'll go with him."

"What about your claim?" Bill asked uneasily.

"There is no guarantee that it won't be virtually taken away from me, as you propose to do with his; therefore, the sooner I get out of town, the better it will be," and Seth allowed his anger to become apparent.

Mr. Grant's vulnerable point was the town of St. Julian, and anything reflecting on it he considered personal; therefore Seth's argument had great weight.

"I reckon we've got as much sand as most folks, an' although the tenderfoot's claim ain't worth a cent more'n yours, we'll pay him what it cost, so's there shan't be any reason to kick."

"That is a very generous proposition after we have struck it rich," Seth replied hotly, forgetting in his excitement that the discovery of the nugget should have been kept a secret.

"What?" Bill screamed, leaping to his feet in amazement.

"We took out a four-pound nugget this afternoon, after the men left us, and you can fancy whether there are any more in the same place."

"You got four-four-four!"

"Exactly," Seth said quietly, as Bill stammered because of a flood of surprise and regret that he had taken so much trouble to salt what was in reality a valuable piece of property. "We have four pounds of pure gold, a bigger lump than can be shown from any other claim in this section of the country, and after a large amount of money has been spent to develop the property, you generously propose to give Morey the same price he paid for what, at the time, was supposed to be valueless."

"When did you find it?" Mr. Grant asked, breathlessly.

Seth related all the details of the discovery, concluding by saying:

"But for Morey I would yet be a pauper, unable to leave this town because of having sunk my money in a piece of ground which Bill did not believe to be worth a cent, although he received five hundred dollars for it. Now, do you suppose I'll sit down quietly and let you drive him off?"

"I'll buy his share of the claim," Mr. Grant said, quickly.

"Would you like to have it known that in order to get possession of a valuable piece of property you began by ordering the owner to leave town?"

"See here, Seth," and here the proprietor showed the most decided signs of anger, "I'll take a good deal from you, but don't go too far. You know the warnin' was given before we heard about the nugget, consequently there can't be anything crooked in the matter. Morey has got to skip, and that settles the story. We'll give him two weeks to get ready, an' after that St. Julian will be a mighty unhealthy place."

Seth made no reply. He understood that it would be useless to do so, and also realized the mistake made in disclosing the secret of the find.

After waiting a moment to learn if Bill had anything to say, he left the office, made his way with difficulty through the crowd of revelers, and walked slowly toward his own home.

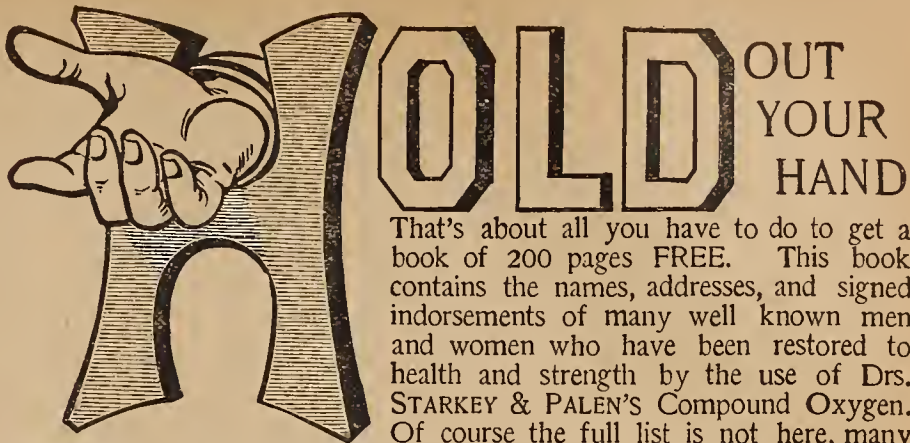
He had not been absent from the house so long that there was any reason for making excuses, either to his sister or partner, and when these two latter retired, it was to dream of the wealth which both believed would come from the double claim.

On the following morning, when Ned went to work with Seth, he found the shaft surrounded by a throng of eager miners, all of whom greeted Seth warmly, but refused to acknowledge his salutations. The story of the nugget was known to all by this time, and in response to their entreaties to be allowed a glimpse of it, Seth referred them to Alice.

"She will show it to you," he said; and a party of twenty started at once for the house to view the "Nugget of Grub-Stake Gulch," as Limpy Jake had already christened it.

Those who remained did so for the purpose of buying the claim, and during the next hour Seth received many tempting offers. The most persistent of these would-be purchasers was no less a person than Mr. Joseph Grant. He had visited the shaft at a very early hour, descended at considerable risk, owing to his rheumatic and asthmatic tendencies, and picked up a nugget weighing half an ounce, which, by the way, he did not consider there was any good reason for delivering to the rightful owners. With this tangible proof of the correctness of Seth's story in his pocket, he could well afford to delay seeing the golden cross in order to purchase the property.

"I'll give you five thousand dollars in hard cash," he said, as Ned was lowered into the shaft, "an' it's a mighty good price, considerin'



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that you may never find any more. I've heard of nuggets turnin' up where there wasn't enough left to put in your eye, an' you oughter take that into consideration."

Seth did not feel warranted in refusing this offer. He was by no means confident that they were any nearer a true vein than before, and the amount was more than sufficient to repay for both the outlay of time and money.

"I will talk with my partner, and let you know to-night," he said; but further than that he would not commit himself, despite all Mr. Grant's entreaties.

Disappointed at not obtaining immediate possession of the property, but yet hopeful of doing so, the proprietor of the Palace walked homeward, meeting Big Bill at the entrance of the alleged palatial saloon.

"I've seen it," the latter said sadly, "an' it shows what a fool I've been. I played Seth for a tenderfoot, an' got left."

"They've struck it rich, for a fact; but if we deal our cards right you won't lose so much."

Then Mr. Grant told of the offer he had made, and concluded by saying:

"We've worked the thing in style so far, an' by keepin' it up, Seth is bound to sell. Instead of allowin' Morey two weeks to get out of town, we must make it two days, an' then he'll be glad to close up his share of the claim."

"Seth will show fight if we try a game of squeezin', an' you know as well as I do that more'n half the boys count on him as bein' dead square. I'd like to take my chance with you of marryin' his sister, but ain't fool enough to get my neck into a sling."

"I'm sorry you're weakenin', but reckon it won't be a hard job to work this thing."

"I ain't weakenin'," Bill cried, angrily. "Show me half a chance an' I'll go as far as you."

"Come 'round here to-morrow, an' I'll give you a few points that'll be worth considerable," Mr. Grant said, with an air of mystery; and Bill walked away muttering:

"It's all very well to figger up what might be done, pervidin' things worked 'cordin' to the programme; but buckin' agin Seth Hammond ain't sich a snap as he reckons on."

[To be continued.]

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Our Household.

LIFE'S STRUGGLE.

BY E. W. P.

We are striving all for victory
On the battlefield of life,
And tho' the spirit weakens,
We must still keep up the strife.
From foes without and foes within,
God makes us conquerors of sin!
The foes which us assail without,
Are but a small array.
To those within, a mighty host,
That threaten us each day,
Till contentment seems a foreign word,
Whose meaning we have never heard.
Of all the motley throng, I deem
Base Envy leads the van,
And goads us on with whip and spur,
Through all life's little span.
So prone to view our neighbor's lot
As something better than we have got.
Perhaps, if we could know the facts
About our neighbor's case,
We would not feel one envious pang
Nor wish to change our place.
Each heart hath its own bitterness
Full measure given, be sure of this.
Anticipation of life's ills
Fill all our days with worry;
We cross the bridge ere it is reached,
As in the olden story;
We dread the future's woes untold,
And thus lose all the present's gold.
We reach afar for happiness,
With sighs and tears galore;
Erewhile the gentle maiden stands
And knocks at our back door,
Thus proving that in humble joy
Is love and peace without alloy.
God never meant that all our woes
Be crowded in one day,
Nor will the burden greater prove
Than we can bear, alway,
If trusting in the God of prayer,
We give each hour its proper share.
E'en the manna in the desert
Was sent for every day,
And so we must our lives conform;
There is no other way.
Fresh strength be sought for every task,
And that is all we need to ask.
One by one the sands of earth
Slow drifting into mountains are;
One by one the sands of life
Float out beyond the harbor bar;
Let each one bear a message bright
Of duties done and deeds of right.

HOME TOPICS.

COOKING POTATOES.—I believe I have more trouble in teaching servants to cook potatoes than with any other article of food. In the first place, they all think they know how to cook potatoes; "just pare the skin off as thickly as possible, and boil them;" or, if they are to be baked, "rinse them in a little water and put them in the oven." They do not seem to have the least idea how long they ought to be cooked, and they almost invariably boil them too long.

The skin of a potato ought to be taken off with as little of the potato as possible. Put them into boiling water with a teaspoonful of salt, and let them boil a half hour for medium-sized potatoes; smaller ones will be done in twenty minutes. Just as soon as they are done, drain the water off and uncover them for a minute or two at an open window or door, to make them white; then mash them if they are to be served in that way. A wire masher

is good, but I like best the press, as there cannot be any hard lumps left after they are put through that.

I have had girls put the potatoes on the stove an hour before dinner time and let them boil until all the best part of the potato

not pared

away, would be boiled out and drained off in the water, nothing but soggy, tasteless lumps remaining. When potatoes are to be baked, they should be well washed—a little brush is best to clean them—baked in a rather quick oven, and eaten the minute they are done.

CREAMED POTATOES.—Mash the potatoes and season them as if for the table, but add nearly twice as much milk as usual and the whipped white of an egg. Put them in the dish in which they are

to be served, rounding the top, and set them in the oven for five minutes.

GLAZED POTATOES.—Peel good-sized potatoes and let them boil fifteen minutes; take them out of the water, put them on a pie-tin, spread a little butter over and brown them in the oven.

LETTING BABIES WALK TOO SOON.—Young mothers often make the mistake of hurrying their babies to walk, and lasting injury is frequently wrought by not letting the child first creep and then walk, in nature's own way and time. A child ought to be allowed to take its own time to begin to walk, and this will not often be before it is twelve or fourteen months old. Even then do not allow it to walk very much for two or three months. Frequently mothers do not like to have their babies creep, as they soil their clothes so badly, and will begin to stand them on their feet and try to have them walk long before their bones are hard enough to have any strain put upon them, and the result is bow legs or crooked ankles, which sometimes the utmost care afterwards will fail to straighten.

When a grown person leads a little child he ought to be very careful not to strain the little arms. I have seen thoughtless persons lift a little child by one arm, and swing them across a gutter or over some obstruction when walking on the street; and often they will walk so fast when leading a little child that the little one is jerked and dragged along in not only a

She is now a woman of fifty years, and a physician; but ever since she has suffered from a nervous affection which causes her lips and lower jaw to tremble whenever she opens her mouth. She says there is no doubt that this affliction was caused by that fright. **MAIDA McL.**

DON'T TALK.

It doesn't pay to do much talking when you're mad enough to choke, Because the word that stings the deepest is the one that's never spoke: Let the other fellow wrangle till the storm has blown away, Then he'll do a heap of thinking 'bout the things you didn't say.

CABINET FOR TOILET PURPOSES.

This very useful article which we present to our readers, will commend itself to everyone who wishes to do away with these toilet articles in a room which must serve for a living room and bed-room as well. It will also be a pleasing undertaking for some of the boys just beginning in woodwork to construct for their own use.

It can be made in frame work, carving the frames and putting the panels in of China silk or cretonnes. In this one, the panels are made of wood and ornamented with poker work. The dimensions are four and one half feet high when closed, two and one half feet across the front and one and one half feet deep. A narrow shelf going around the top will hold any toilet bottles; two sets of drawers underneath, two small and one long, will hold brushes and towels, and a shelf below could be utilized for shoes.

Made even of the very plainest material and adornments it could become a very useful article. These adornments of home, made by the hands of one of our dear ones, are always cherished beyond everything.

CHRISTIE IRVING.

WHITEWASH.

The time for spring cleaning-up is nearing. While the weather is too cold to do much with the house, the yard and garden can be put in the best of order. Beds fixed up ready for the early plantings, whitewashing done to get ahead of the vermin that will hatch out as soon as the warmer days begin to come. Experienced people say that much of the vermin could be destroyed if taken while in the egg

form; March is a good time for this.

If the closets are thoroughly cleansed and cracks sealed with plaster of Paris, in which a little arsenic and some camphor is used, they will not appear that year, certainly. A good whitewash can be made from the following recipe:

One half bushel of good lime, five pounds of rock salt, dissolved, one half pound whiting, four pounds ground rice, boiled to a thin paste, one half pound clean grease. Slack the lime in a tight box or barrel, with hot water, keeping the box covered that the steam may not escape. It can be tinted if desired. Slack to the consistency of thick cream. Thin it when used, so that it will flow freely from the brush. If put on too thick, it will flake off more or less when dried. The above is for outside work. For indoors, slack the lime as above, omitting the salt, grease and rice. Instead of thinning the creamy solution with water, use skim-milk. This latter is a secret worth knowing.

If a wall has been whitewashed, it will have to be scraped, and sized with a weak solution of glue, before putting paper upon it, as it will not hold. It is not advisable to paper a kitchen, as the steam from the cooking will cause it come off. The best way to treat a kitchen wall is to paint it; if that is inexpedient, whitewash is better, as it can more often be renewed. A very

little vermilion powder put in will tint the wall a very pretty shade of pink, which wears better than white. Any color will soil in a few months' time. A hood over the stove, with a pipe to enter the chimney, will carry off much that usually settles on the walls. It is an expense at first, but it saves money at last.

A great deal of money goes every year for cleaning up; it seems wasted until we remember that it is highly essential for



DECORATED JAR.

health. March, with its wind and cold, is nature's cleaning-up time. The cold freezes out the bad odors, and the winds blow away much of the trash.

BETTINA HOLLIS.

THE BEST DAY.

That day is best wherein we give
A thought to others' sorrows;
Forgetting self, we learn to live;
And blessings born of kindly deeds
Make golden our to-morrows.

—Rose Hartwick Thorpe.

DECORATED JAR.

The little jar given in the illustration was bought at the grocery for twenty cents; but not the jar alone. It was full of delicious strawberry jam; perhaps not delicious to fortunate country folks who raise their own berries and make their own jam; but a town woman who "takes her meals out," at least her dinners, and for the rest does "light housekeeping," will make a very good lunch with bread and butter and such jam as comes in these little jars. My pantry has accumulated quite a number of them, empty, and it occurred to me that they had decorative possibilities. The size of each is a trifle more than four inches in height and three and one half inches in circumference. They are a coarse grade of iron-stone ware, glazed within and without, except the bottom and the top rim. Where it is glazed, the color is a warm cream, and the unglazed rim is quite yellow. In short, the jar is pretty. The shape is good. Simplicity in form is a thousand times better than foolish little twists and turns, corners and crinkles.

In these days, a woman without a box of paints is almost as rare as a woman without a pin-cushion. My paint-box in the closet, and my empty jam-jar in the pantry, gave me mutual suggestions. The result you may all copy; or, what is better, take as a hint from which you can start out on a original track.

Two very pretty flower bands are given, of a proper size to transfer to the jar, and oh, joy! The little jar has such a roughness of surface that by laying on it a new piece of black transfer paper, and the design on top, by going over the outlines with a sharp point (lead pencil will do), the whole flower-band will be distinctly traced on the jar! This is a great help to make the painting easy.

It will be a good plan to use something in the paint to give it as high a glaze as is on the jar. If you have *siccatis*, use that; if not, get five cents' worth of Japan at the drug-store and mix it with your paint just as though it were oil. Now, if you get a dime's worth of gilt (there is a preparation comes with the Diamond dye packages), you will be ready to decorate your jar in fine style.

Paint the roses with a light but gay shade of pink made by mixing white with madder lake, or geranium lake, whichever you happen to have. Paint the centers with delicate green, outlined with burnt sienna. The stamens paint light yellow, with little touches of burnt sienna to make them effective. The dark ground behind the roses make a very dark green; make it with a little white, Antwerp or Prussian blue, yellow ochre, burnt sienna and a little black. Paint the stems, which



HOME-MADE CABINET WASH-STAND, CLOSED.

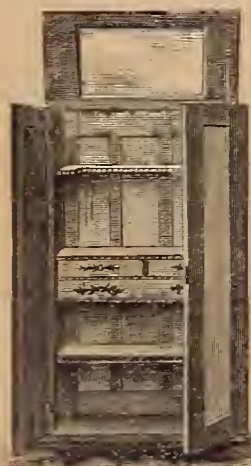
very uncomfortable way, but one that is positively injurious.

FRIGHTENING CHILDREN.—One can hardly compute the evil which may result from a sudden fright to a little child. The most serious results have followed a fright caused by an older child hiding and suddenly springing out at the little one. Even grown people will do this, just to see the child jump.

Not long ago, I heard a lady tell to some young mothers the story of a fright she received when about six years old. She said that she was playing with an older brother in the evening, and when her bedtime came, her mother was busy and told her to go and prepare for bed. She slept in a room that opened out of the family sitting-room. She objected to going without a light, but her mother said:

"Leave the door open, Carrie, and you can see. I shall be sitting here all the time."

So she went, without noticing that her brother had left the room. When she was ready for bed and about to step in, a hand reached from under the bed and caught her by the foot. Her brother had hidden there, thinking to have fine sport frightening her. She gave one scream and fainted, and for days thereafter was in such a state of nervous excitement that at times they feared she would not live.



HOME-MADE CABINET WASH-STAND, OPEN.

interlace along the edge of the design, with light, warm green. The long, pointed decorations below the flower-band paint with the dark green which you used for the ground behind the roses.

Now, outline the entire scheme of decoration with a pronounced line of gilt. There, you have a handsome jug, and it cost you next to nothing. It can be used on the table to hold celery, crackers or ginger-snaps. You can call it a bonbon box and set it on the mantel full of home-made candy, from which one may occasionally nibble to keep up his good spirits and sweeten his temper with a sugar plum. If it only had a cover! Can't some one invent a cover?

The pansy design is as pretty as the

The year's at the spring
And day's at the morn;
Morning's at seven;
The hillside's dew-pearled;
The lark's on the wing;
The snail's on the thorn;
God's in his heaven—
All's right with the world.
—Robert Browning.

A WORD TO THE BOYS.

Well, boys, what are you going to do those stormy days that windy old March has in store for us?

Can't you find something more profitable than sitting by the stove at the corner grocery, breathing air foul with tobacco smoke and listening to rude and rough jokes and scandals that benefit no one for

disagreeable out of doors. Some boys learn to knit and crochet, to pass away spare moments; and I have seen some of their work that would rival their fairer sisters in finish and neatness. Try it, boys, those who think they would like that kind of work. Don't let false pride stand in your way, "cause its girl's work."

What shall we do with the merry, whistling boy that whittles an accompaniment to his tunes? Active, restless and ready for mischief. Give him a warm corner in the kitchen—or, better, a small room—and let him whistle and let him whittle. A scroll-saw or turning-lathe would be very acceptable here. If that is impossible, perhaps you can get a saw, plane and hammer and try your hand at furniture making. There are many articles that can be made at home at half the expense of buying, and if one gets interested in this line of work, he will be astonished to see how simple some of the articles are to be made, when closely examined, and how fast he will improve in their manufacture.

There are many varieties of stands, hanging book-shelves, corner stands, hat-racks and even bureaus are not beyond the skill of the home cabinet-maker. The frame for the glass seems hardest to make; I will send two designs that are both original and home-made. After an article is finished it should be thoroughly sand-papered until the surface is as smooth as glass; then apply a coating of good varnish. If you want an extra finish, go over the article again, when the varnish is dry, with pumice stone and water, polishing smooth any rough places in the varnish. Now, give a second coat of varnish, and perhaps a third, and you will have a surface almost like marble in its smoothness.

GYPSY.

RULES FOR RAG CARPET.

Be sure and wash your rags well before cutting, and sew rags together of the same thickness only.

Avoid, if possible, any coarse rags, such as old pants and coats, as it makes rough carpet.

Never cut the rags around a square piece of cloth, but cut straight through and sew together. When you cut a square corner it leaves a bunch in the carpet, and is easily broken.

When sewing hit or miss, be sure and mix the colors as much as possible.

When winding rags, do not put two or more colors in one ball, as the weaver goes by the outside color, and in a great many cases gets left (and so does the carpet), when all the blame is then put on the weaver.

Do not think because you have fifteen or more colors that you are going to have a pretty carpet, for the prettiest carpets contain only from seven to nine colors. Be careful to have the colors of the same shade all through, and sew all the others into hit or miss balls.

Rinse the rags well after coloring, or they will be very dusty from the dye and shorten the days of the weaver.

Never use rags from an old carpet that has served its time and has been turned and washed until it ceases to exist as a carpet. After finishing one or more balls of rags, do

not put them in the attic to be covered with dust, food for the moth and a home for the mouse; but take good care and put them where no dust can get to them.

We do not need an introduction to the lady who sends rags to us. In a great many cases we do not desire one. A weaver takes a peep into your every-day life when he or she looks at your rags. They know you—whether your clothes are good or bad, whether you speak Greek or Latin. We cast no insinuations, but if the shoe fits do not blame us, for we had nothing to do with the shaping of your foot.

Do not be surprised when you ask your weaver the size of your rooms, if they do not know, for it is one of their great failings not to know the size of every room in the state. Measure the room yourself and give the exact dimensions if you want it woven to fit the same.

Make your own stripe by winding the rags on a stick as you want it in your carpet, as the weaver may have a different taste and not suit you. Do not expect a ball the size of a hen's egg to go through twenty or more yards.

It generally takes from one to ten years to prepare a carpet, and then it is taken to the nearest weaver and is wanted the same or next day. Do not expect this. You have taken your time, so give the weaver time to cough up some of the dust taken prior to your coming.

A very neat and nice rug can be woven from worn-out ingrain carpet by cutting it into strips about one inch wide, ravel out both sides all but a few threads in the center and sew them together as for carpet. When woven, the fringe will come through the warp, covering it completely.

GEO. W. S., Weaver.

\$3000

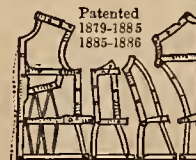
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DECORATIVE BAND FOR JARS.

roses. When a person gets the knack of painting pansies, she can almost do it with her eyes shut. Let me give you some general directions: Where one petal laps over another, *always* make the *under* petal darker. The petal on top make *very* light at the edge. Follow that rule and your highest lights will always come next to your deepest shades and produce what artists call *effect*. In the center of each pansy there are always two short, white lines meeting like a caret, so ^. These must be *white*, and the dark spots of color (those spots which make the "face") will come next to these two short, white lines—two at the sides above and one below—and again produce effect.

I said a person might learn to paint pansies with her eyes shut. No, that was saying too much; but there is no flower so easily painted from memory. One touch of color I forgot to mention; that is the bright yellow in the center just below the two short, white lines. The yellow is above the dark marking in the lower petal. If pansies are painted without a background, give them a distinct outline. The color proper for purple pansies is made by mixing white, cobalt blue and madder lake. There is a dark, reddish variety which requires white and burnt sienna mixed. White pansies are beautiful, and need the color which is necessary to shade all white flowers. Some persons use a little black for this purpose, while others prefer a gray, made by mixing red, yellow, blue and white in the proper proportions.

A very pretty jar like the one in our picture is on my neighbor's mantel. She has a decoration of apple blossoms on it. They are arranged in clusters, so that at the top they form points downward, and at the bottom the points direct upward.



DECORATIVE BAND FOR JARS.

Among the blossoms and around the pointed clusters gilt is splattered in a very ornamental way. A shower of single blossoms of any kind, falling in every possible position, would be a pretty way to paint one. Always make your outlines distinct; that is the secret of effective decorative art.
KATE KAUFFMAN.

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a good one; something that is worth reading, worth remembering. In this age of progress, there is an inexhaustible supply of information to be gained in study, on nearly every subject one can think of. Mix in a little good poetry from our best authors as a recreation from study; and you will find that you like it twice as well if you read some aloud to the mother or sister who cannot rest on the sofa because it is a stormy day. They can appreciate it just as well as the "other fellow's sister," to whom you could read by the hour. Help make sunshine in the house, though the clouds may hover, gloomy and

Our Household.

COLORING RECIPES.

In using the following recipes, remember that the goods should always be wet in hot soapsuds before they are put in the dye. The dyes should be thoroughly dissolved and hot. Constantly stir the goods, lifting them up to the air and turning them over.

BROWN.—To five pounds of goods allow one pound of catechu and two ounces of alum dissolved in sufficient hot water to wet the goods. Put this in a tin boiler on the stove, and when it is boiling hot, put in the goods and remove it from the stove. Have ready four ounces of bi-chromate of potash dissolved in hot water in a wooden pail. Drain the goods from the catechu and dip them into the bi-chromate of potash, then back into the catechu again. Proceed in this way, dipping into each alternately until the required shade is produced. This does equally well on cotton, wool or silk.

BLUE (ON COTTON).—Dissolve four ounces of copperas in three or four gallons of water. Soak the goods thoroughly in this and then drain and transfer to a solution of two ounces of prussiate of potash in the same quantity of water. Lift the goods from this and put them to drain; then add to the prussiate of potash solution one half ounce of oil of vitriol, being careful

of bi-chromate of potash in cold water in a wooden vessel. Dip the goods first in the lead water then in the potash, so continuing until the color suits. Sufficient for five pounds of rags.

DARK BROWN (ON COTTON).—For ten pounds of cloth take four ounces of bluevitriol, two pounds of catechu and six ounces of bi-chromate of potash. Put the catechu in an iron kettle, in cold water enough to cover the cloth, heat until dissolved; dissolve the vitriol and add it to the dye; put in the cloth and scald it an hour or more. Wring it from the dye; dissolve the bi-chromate of potash in boiling water in a kettle and put in the cloth for fifteen minutes.

As the careful housewife is now looking up the possibilities of a new carpet, we submit these coloring recipes, hoping they may be of service. LAURA NILSON.

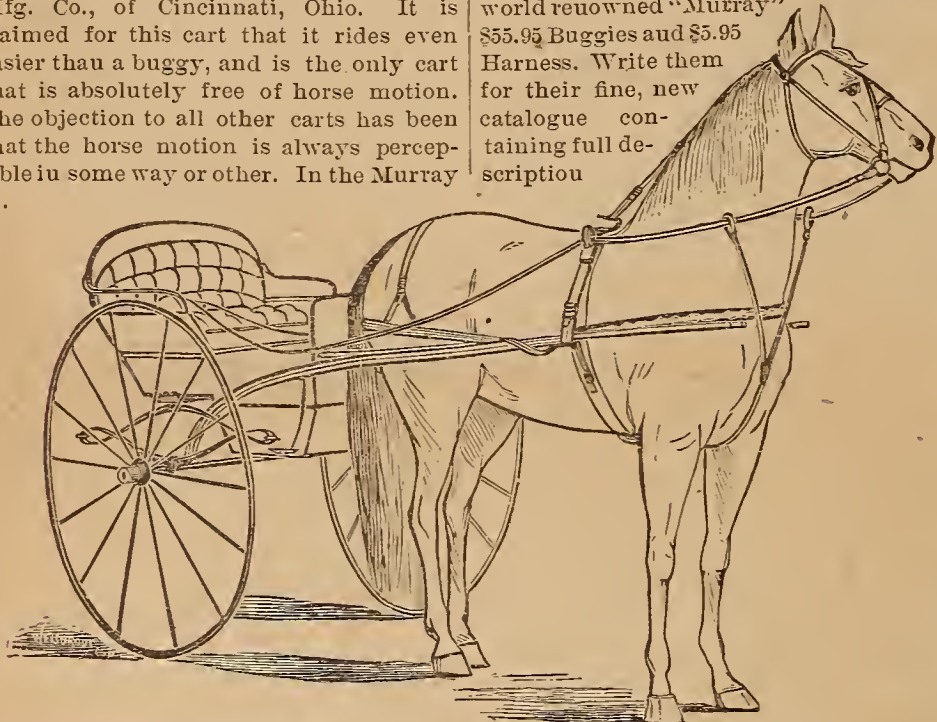
GOOD HINTS.

TO KEEP EGGS.—Have them perfectly fresh. Take a kettle of boiling water, put half a dozen eggs into a frying-basket and dip them into the hot water. Do not let them remain any time, but be a little slow in dipping. It closes the pores of the shell and makes them air-tight. Last June I packed eggs, prepared like this in a box, with the small ends down—as I think the yolks less liable to adhere to the shell in this position—placed them in the cellar; am now using them with fresh

THE MURRAY "COMFORT SPRING" CART.

Our illustration represents the new Murray "Comfort Spring" Cart, which is manufactured by the Wilber H. Murray Mfg. Co., of Cincinnati, Ohio. It is claimed for this cart that it rides even easier than a buggy, and is the only cart that is absolutely free of horse motion. The objection to all other carts has been that the horse motion is always perceptible in some way or other. In the Murray

usefulness, ease of riding and style and the price is a marvel of cheapness. The Murray people make a full line of carts; they are also the manufacturers of the world renowned "Murray" \$55.95 Buggies and \$5.95 Harness. Write them for their fine, new catalogue containing full description



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and prices of their work. Their address is, Wilber H. Murray Mfg. Co., Murray Building, Cincinnati, Ohio. They sell direct to the consumer, and do not belong to the so-called Buggy or Harness Trust.

to pour in a few drops only at a time; stir thoroughly, return the goods, and as soon as of the desired shade, rinse them in clear water and dry. Enough for five pounds.

YELLOW (ON COTTON).—Dissolve one pound of sugar of lead in enough water to thoroughly saturate the goods, and one half pound of bi-chromate of potash in the same quantity of water in a separate vessel. Dip the goods well and drain in each alternately until the desired shade is secured; then rinse and dry. If an orange color is desired, dip the yellow rags in strong, hot lime water before rinsing.

GREEN (ON COTTON).—First color blue, and then dip in the yellow coloring.

TURKEY-RED (ON COTTON).—For four pounds of cloth take one pound of sumac in enough soft water to cover the cloth in a tub; soak over night, ring out and rinse in soft water. Take two ounces of muriate of tin in clear, soft water; put in the cloth and let it remain fifteen minutes. Put three pounds of bur-wood in cold, soft water in a boiler, on the stove; when nearly to a boil, partly cool, then put in the cloth and boil one hour. Take out the cloth and add to the water in the boiler one ounce of oil of vitriol; put in the cloth and boil fifteen minutes. Rinse in cold water.

CANARY (ON COTTON).—Take one half pound of sugar of lead and dissolve it in hot water. Dissolve one fourth of a pound

ones and cannot see any difference. The whites and yolks separate and beat as light and quick as the fresh and are equally as good when cooked.

Drippings from pork, beef and even lamb, can be whitened and cleaned by melting in water. Put all in a dish and add half as much water. When melted, strain the first time. After the drippings are cold, take the cake from the water and scrape the settlings off. Melt again in fresh water and repeat till white and clear. Then fry a few potatoes in the fat and it is ready for fritters, croquettes or anything one may wish to fry. If the taste and odor of lard is unpleasant, potatoes, with a little salt cooked in it, will remove both. It will be just as good as the "XXX" that is sold in packages, claimed to be a superior article, at an extra price.

When the buckwheat cakes refuse to brown—as they will at times—sprinkle in a few bread crumbs. Take all the pieces and crusts of bread, dry till crisp in the oven; if they brown a little it will not harm them. Roll with the rolling-pin till they are pulverized. Keep in a jar ready for use. A handful or two will make the cakes perfection if baked on a hot griddle.

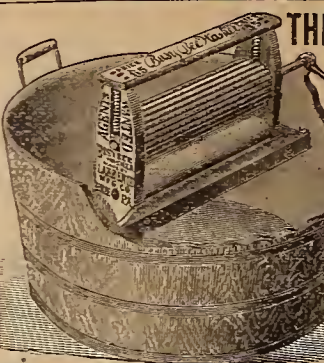
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Knife, 65c; Shears, 60c. Both \$1, postpaid. Cnt is exact size; price 65c, our price for awhile 48c; 5 for \$2; best razor-steel blades. Gent's fine 3-blade, \$1; boy's 2-blade, 25c; lady's pearl, 35c; pruning, 75c; budding, 55c; grafting, 25c; 7-inch best steel shears, 60 cts. **SPECIAL OFFER!** This knife and 7-inch shears, postpaid, \$1.00. Hollow ground razor, \$1.25; best strop ever made, 50c. Illustrated List FREE, and "How to use a RAZOR."



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MUST BE SOLD!

Lot No. 3. Gents' Solid Gold Waltham, full jeweled, full engraved, stem wind. Only.....\$21.25
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THE CHICAGO WATCH CO. 142 Dearborn Street, Capital Stock, \$130,000, CHICAGO.

Our Sunday Afternoon.

I SHALL SEE HIM.

I have not seen his face,
And yet I know he is, and that his love
Fills earth, and is the joy of heaven above.

I have not seen his face,
Yet all around me, every day and hour,
I see his handiwork, and feel his love and
power.

I have not seen his face,
And yet I know him, and I hear his voice
Of music, bidding all my heart rejoice.

I have not seen his face,
And yet he doth my very being thrill
With rapture, as he whispers, "Peace, be still."

And I shall see his face,
When earth and darkness shall have passed
away,
And I have reached the land of endless day.

Yes, I shall see his face,
My light, my love, my master and my king,
And of his goodness evermore I'll sing.

—The Treasury.

TO MAKE A HOME OUT OF A HOUSEHOLD.

PROBABLY no one feature of the modern æsthetic phase in house furnishings is more conducive to health and comfort, as well as beauty, than the substitution of rugs for carpets. A writer in the *Chautauquan* for November says:

"Next, the economy of the rug is fast becoming a matter of experience. While it may cost more than the carpet to begin with, yet the saving in money, time and trouble can be demonstrated. The wear and tear of tacking and untacking need not be dwelt upon, while to this must be added the stretching, as tension on a laid carpet greatly taxes its durability, and the especially vigorous treatment it must receive if beaten only once a year. In considering durability it must not be forgotten that a rug can be turned about at pleasure to equalize the wear and fade, and that escaping all irregularities, such as bay windows, fire-places and registers, it may serve equally well for a succession of rooms, which is certainly a great advantage to one living in a rented house."

The economic side of the question is here sufficiently demonstrated; but even beyond this is that of the perfect cleanliness possible with the rug, and the result in pure air and health. A carpet at best is a storer-up of dust. Then, to the eye educated to the beauty of the polished floor and the rug, the carpeted room becomes a terror. The day is fast approaching when the polished floor and the rug will be the rule, rather than the exception, and with this the terrors of house-cleaning are largely done away. The dainty cleaning of each day will render largely unnecessary the general upheaval that turns the home into a camp for a week, once or twice a year. That housekeeping where everything is always done and never doing, is the perfection of grace and comfort.

TRUE CHRISTIAN SERVICE.

Three elements are needed if one is to be successful in Christian service, of course presupposing the new birth, without which no act can be helpful to Christ's cause.

1. *Consecration.* This is man's act, as sanctification is God's. Without it, service is cold and formal; with it, there is life and warmth. Without it, selfishness is too predominant and our powers are not brought into fullest exercise for God; with it, selfishness is unknown, and our sanctified powers—for God always sanctifies what we consecrate—are increased in value as moral forces. A truly consecrated man cannot be selfish, for the heart of consecration is self-denial, and a placing of one's self utterly in the divine hand. "Who then is willing to consecrate his service this day unto the Lord?"

2. *Concentration.* There are many Christians whose efforts in the master's service are comparatively barren, because they scatter themselves over too much territory and are trying to do too many things. Humanitarian, literary, scientific, educational, philanthropic, sociological and religious efforts and schemes are a hopeless tangle in their minds, hearts and engagement books. When we broaden the channel of a stream, we lose power and depth, though we gain breadth. Power and depth are more important in Christian service than mere breadth.

3. *Constancy.* It is not the impetuous

man who accomplishes the greatest results. We must be willing to patiently plod along, if need be, with eyes fixed on the goal.—*Messiah's Herald.*

A KIND VOICE.

In speaking of the power of kindness, Elihu Burritt once remarked of the voice: "There is no power of love so hard to get and keep as a kind voice. A kind hand is deaf and dumb. It may be rough in flesh and blood, yet do the work of a soft heart, and do it with a soft touch. But there is no one thing that love so much needs as a sweet voice, to tell what it means and feels; and it is hard to get and keep in the right tone. One must start in youth, and be on the watch night and day, at work and at play, to get and keep a voice that shall speak at all times the thoughts of a kind heart."

It is often in youth that one gets a voice or tone that is sharp, and it sticks to him through life, and it stirs up ill will and falls like a drop of gall upon the sweet joys of home. Watch it day by day as a pearl of great price, for it will be worth more to you in days to come than the best pearl hid in the sea. A kind voice is to the heart what light is to the eye. It is a light that sings as well as shines.—*Congregationalist.*

"FAINT, YET PURSUING."

What three little words could be more blessedly descriptive of the Christian than these? Not "faint and sitting down;" not "faint and giving up;" but "faint, yet pursuing." We have to do with him who "giveth power to the faint," and who, "to them that have no might, increaseth strength." It is a blessed use to make of our faintness and weariness, that of drawing out of the fullness of the supply of grace and strength in Christ. It is said: "Be strong in the Lord, and in the power of his might;" but to whom? To the one who has no strength in himself—who would give up his course if strength were not supplied to him? One victory achieved, the conflict goes on afresh. Do we find ourselves failing in spirit? Still let us go on, for our God giveth strength to the weak. We like not this trial of faith. It is very painful, doubtless, to feel day after day our own weakness. We want to feel that the battle is over, but let us remember that now is our time of war.—*Bible Standard.*

MEETING OUR OWN PRAYERS.

In eternity it will be a terrible thing for many a man to meet his own prayers. Their very language will condemn him, for he knew his duty and he did it not. Those fervent prayers, which the good man labored to make effectual, will be "shining ones" in white raiment, to condemn their author into the banqueting house of the Great King. But the falsehoods uttered at the throne of grace will live again as tormenting scorpions in the day of the Lord's appearing. "Be not rash with thy mouth, nor let thy heart be hasty to utter anything before God," is an objection that forbids more than irreverence in prayer. It forbids us, by implication, to ask for that which we do not desire. Above all, it forbids the asking from God those blessings which we are hindering by our neglect, or thwarting by our selfishness and unbelief.

MATRIMONY.

It has been remarked that, in general, persons choose to unite themselves in matrimony to a partner the most opposite in every point, moral and physical. Generally speaking, indeed, it seems as if every man, upon intimate acquaintance, became heartily sick of his own self, and married a person as unlike the disagreeable original as possible.



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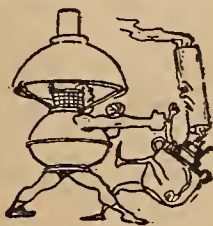
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Of Pure Cod Liver Oil with Hypophosphites Of Lime and Soda.

There are emulsions and emulsions, and there is still much skimmed milk which masquerades as cream. Try as they will many manufacturers cannot so disguise their cod liver oil as to make it palatable to sensitive stomachs. Scott's Emulsion of PURE NORWEGIAN COD LIVER OIL, combined with Hypophosphites is almost as palatable as milk. For this reason as well as for the fact of the stimulating qualities of the Hypophosphites, Physicians frequently prescribe it in cases of

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SCROFULA, BRONCHITIS and CHRONIC COUGH or SEVERE COLD. All Druggists sell it, but be sure you get the genuine, as there are poor imitations.



Nobody cares how much oil a lamp burns—oil is cheap. But, if the "Pittsburgh"

burns less oil and gives more light than any other central-draft lamp, we all care; and we care a good deal; for it shows that the other lamps evaporate oil without burning it, while the "Pittsburgh" burns it.

Besides, the "Pittsburgh" is easy to manage; the others are not. The "Pittsburgh" is clean by habit; the others are foul by habit—they have dirt pockets, every one of them. Send for a primer.

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should use WINCHESTER'S HYPOPHOSPHITE OF LIME AND SODA to keep the system supplied with Phosphorus, and thus sustain the Vital Force, Nerve Power and Energy. It strengthens and builds up the whole nervous and general system. SOLD BY DRUGGISTS.

WINCHESTER & CO. Chemists
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Combining the McKinley Tariff Bill and the Administrative Customs Act. Everybody interested in the Tariff (and who is not?) will find this an invaluable book of reference. It contains the old and new duties in opposite columns. Will be sent to any address by mail on receipt of 40 cents. JOHN DANNEKER, 1313 North Ave., Milwaukee, Wis. [Mention this paper.]



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AGENTS are making FROM \$75 TO \$150 PER MONTH. FARMERS MAKE \$200 TO \$500 DURING THE WINTER. LADIES have great success selling this Washer. Retail price only \$5. Sample to those desiring an agency \$2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars. LOVELL WASHER CO. 101 Huron St. ERIE, PA. Always mention this paper.

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Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

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At low cost. Have your clothes made to order, where it is well and stylishly done.
PANTS \$3 TO \$10
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ALL WOOL, WELL TRIMMED, PERFECT FIT.
Samples, self-measuring rules and tape measure sent FREE, upon application.
DELAWARE WOOLEN MILLS,
N. W. Cor. 4th & Market Sts., Phila., Pa.
When you write mention this paper.

DONALD KENNEDY

Of Roxbury, Mass., says

My Medical Discovery seldom takes hold of two people alike! Why? Because no two people have the same weak spot. Beginning at the stomach it goes searching through the body for any hidden humor. Nine times out of ten, inward humor makes the weak spot. Perhaps its only a little sediment left on a nerve or in a gland; the Medical Discovery slides it right along, and you find quick happiness from the first bottle. Perhaps its a big sediment or open sore, well settled somewhere, ready to fight. The Medical Discovery begins the fight, and you think it pretty hard, but soon you thank me for making something that has reached your weak spot. Write me if you want to know more about it.



WATCH WHEN THE DOG COMES OUT.

This Weather Warning will faithfully forecast the weather for the next 24 hours, so that you can get your own weather report without waiting for the newspapers to tell you what the weather is going to be. It is a cyclone warning. When the weather is going to be wet, a fine noble dog arises from his kennel back in the distance, and approaches the opening (see illustration above), giving a signal that there is a storm approaching, and as the storm subsides, or if it will be over during the next 24 hours, a butterfly in all its splendor appears to tell you that sunshine is at hand, to gladden the hearts of mankind. The butterfly and the dog are made of metal in handsome colors. The front is handsomely decorated with fancy designs and figures. In the centre stands an accurate thermometer; the whole thing being so simple that a child will understand it at once. When the devastating hurricane, cyclone and wind storms are approaching your home, this machine warns you long ahead, giving you time to prepare. It is a wonderful machine, and will save your life and many a dollar besides. It tells you whether you had better take your umbrella with you to-day. It tells a lady the weather, and she will know the most suitable dress to wear, etc. Enclose 50 cents to Morse & Co., Box 897 Augusta, Me. Mention this paper when you answer this.

10 CENTS (silver) pays for your address in the "AGENT'S DIRECTORY," which goes whirling all over the United States, and you will get hundreds of samples, circulars, books, newspapers, magazines, etc., from those who want agents. You will get lots of good reading free and will be WELL PLEASED with the small investment. List containing name sent to each person answering. T. D. CAMPBELL, B 74, Boylston, Ind.

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A WHOLE PRINTING OUTFIT, COMPLETE, PRACTICAL & PERFECT. Just as shown in cut. 3 Alphabets of neat Type, Bottle of Indelible Ink, Pad, Trowers, a neat case with catalogue and directions "HOW TO BE A PRINTER." Sets up any name, prints cards, paper, envelopes, etc., marks linen. Worth 50c. BEWARE OF cheap COUNTERFEITS. Postpaid only 25c. 3, 6c, 6 for \$1. Ag'ts wanted. INGERSOL & BRO., 65 CORLAND ST. N. Y. CITY.

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SEND us your address and we will make you a present of the best Automatic WASHING MACHINE in the World. No wash-board or rubbing needed. We want you to show it to your friends, or act as agent for us. You can GET THE MONEY. We also give a HANDSOME WATCH to the first from each county. Write quick. Address N. Y. LAUNDRY WORKS, 25 Dev St., N. Y.



A GOLD MINE.

This Gold Ring is 22 karats fine and is made from the pure bars of gold. Don't throw away your money buying brass rings advertised by others under misleading names but buy this 22 karat Pure Gold Ring which will be sent to any address on receipt of \$1.00. The Chicago Watch Co., 142 Dearborn St., Chicago. Always mention this paper.

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STATE & MONROE STS., CHICAGO. Will mail, free, their newly enlarged Catalogue of Band Instruments, Uniforms and Equipments, 400 Fine Illustrations describing every article required by Bands or Drum Corps, including Repairing Materials, Trimmings, etc. Contains Instructions for Amateurs Bands, Exercises and Scales, Drum Major's Tactics, By-Laws, and a Selected List of Band Music. Mention this paper when you write.

Gleanings.

WEDDING GIFTS.

Harper's Bazar, in a judicious editorial on wedding gifts, has this to say concerning a custom which, happily, is no longer countenanced by the best society: "That one may have as many recurring wedding festivals as there are wedding days recurring, no one will deny. But that one may turn any of these festivals into an excuse for begging and receiving, an excuse for imposing another domestic tax upon friends and acquaintances, no one now will assert, whatever may have been polite usage a generation since. Indeed, whenever one thinks of the great sacredness and tenderness of the marriage relation, it seems difficult to see how any can be willing to vulgarize and profane it by such a custom as the asking and receiving of gifts, and we would expect its anniversaries to be celebrated, not in rude merry-making, but with a sort of sweet solemnity, making such things impossible."

DON'T HURRY.

When we read that we must "never put off till to-morrow what we can do to-day," in what a fever of excitement and "high pressure" we find ourselves, as if the responsibility of the whole world rested on our shoulders. Perhaps Franklin was right; but that proverb cannot apply to people of this nineteenth century, when there is such a mad rush for wealth and amusement that everybody would be a "condensed Methuselah." There is no sense in drawing the tension so that it snaps in one year, while with a more moderate strain it may hold for twenty. But "hurry" seems the motto for the American people, and the following lines from Holmes just strike the keynote, and are well worth memorizing:

"Don't catch the fidgets; you have found your place

Just in the focus of a nervous race,
Fretful to change and rapid to discuss,
Full of excitement, always in a fuss,
And with new notions—let me change the rule:
Don't strike the iron till 'tis slightly cool."

ORANGE BASKETS.

While oranges are plentiful, this dainty recipe will be found to be an attractive addition to a refreshment table. Take any number of oranges needed, and from the top of each cut out a circular piece and remove the inside with a spoon or the finger, being careful not to get the white pulp with it. Make gelatine in the usual way, and use the orange you extracted as part of the flavoring. It must be highly flavored. Fill each basket with the gelatine; but before this is done, scallop out with a pair of scissors the edge of each. Set them away to cool.

BAY RUM "AFTER SHAVE."

Bay rum, three pints; glycerine, one half pint; extract of violet, one half fluid ounce; rose water, one half pint. Mix and filter if necessary. This combination also makes a splendid lotion for chapped hands and face, and is excellent to use after the bath.

To cure a felon, says a correspondent, mix equal parts of strong ammonia and water and hold your finger in it for fifteen minutes. After that withdraw it and tie a piece of cloth completely saturated with the mixture around it and keep it there till dry. If this treatment is adopted when the ailment is at first realized, the pains will cease at once.

Doctor Flint is quoted as saying: "I have never known a dyspeptic to recover vigorous health who undertook to live after a strictly regulated diet, and I have never known an instance of a healthy person living according to a strictly dietetic system who did not become a dyspeptic."

IT IS BEST TO BREAK UP A CATARRHAL COLD in its early stages, by using Dr. D. Jayne's Expectorant, and thereby save yourself much risk and misery.

ECONOMY IN A FAMILY.

There is nothing which goes so far toward placing young people beyond the reach of poverty as economy in the management of their domestic affairs. It matters not whether a man furnish little or much for his family, if there is a continual leakage in the kitchen or in the parlor. It is the husband's duty to bring into the house, and it is the duty of the wife to see that nothing goes wrongfully out of it; not the least article, however unimportant in itself, for it establishes a precedent; nor under any pretense, for it opens the door for ruin to stalk in; and he seldom leaves an opportunity unimproved. The husband's interest should be the wife's care, and her greatest ambition should carry her no farther than his welfare or happiness, together with that of her children. This should be her sole aim, and the theater of her exploits in the bosom of her family, where she may do as much toward making a fortune as he can in the counting-room or workshop. It is not the money earned that makes a man wealthy; it is what he saves from his earnings. A good and prudent husband makes a deposit of the fruits of his labor with his best friend, and if that friend be not true to him, what has he to hope? If he dare not place confidence in the companion of his bosom, where is he to place it?

THE VALUE OF EXERCISE.

In order to secure a long life and a green, old age, somebody has said, and no one will dispute, bodily vigor should be sustained by regular, systematic exercise, avoiding all sudden strain and prolonged exertion as much as possible. Especially is this true of running, lifting, climbing, etc. And labor, while desirable in moderation, should never be prolonged till it produces exhaustion.

Recent Publications.

CATALOGUES RECEIVED.

Orange County Nursery. T. J. Dwyer, Cornwall, N. Y.
Everything in Seeds. Twenty-first annual catalogue. A. D. Perry & Co., 217 Warren St., Syracuse, N. Y.
Burpee's select list of novelties and specialties for 1891. W. Atlee Burpee & Co., Philadelphia, Pa.
Annual seed catalogue. F. W. Ritter & Co., Dayton, Ohio.
Retail catalogue of warranted vegetable, flower and grain seeds. James J. H. Gregory, Marblehead, Mass.
Small fruit plants. F. R. Palmer & Son, Mansfield, Ohio.
Reliable seeds. Frank Finch, Clyde, N. Y.
Illustrated hand-hook of vegetable and flower seeds. W. W. Rawson & Co., Boston, Mass.
Vick's Floral Guide. James Vick, seedsman, Rochester, N. Y.
American Grape Vines. George S. Josselyn, Fredonia, N. Y.
Small fruits. D. Brandt, Bremen, Ohio.
Guide to Horticulture. J. T. Lovett Company, Little Silver, N. J.
Catalogue of Green's Nursery Co. Chas. A. Green, Rochester, N. Y.
Garden and farm seeds, implements, plants, bulbs, etc. John A. Salger, La Crosse, Wis.
Seed catalogue for farm and garden. T. W. Wood & Sons, Richmond, Va.
Field and garden seeds. Bouk & Aupert, Greenwood, Neb.
Garden and Farm Manual. Johnson & Stokes, Philadelphia, Pa.
Horticultural Guide. Currie Bros., Milwaukee, Wis.
Garden, field and flower seeds. Samuel Wilson, Mechanicsville, Pa.
Coles' Garden Annual. Coles' Seed Store, Pella, Iowa.
Pedigree seeds. A. C. Nellis & Co., 62 Cortlandt street, New York.
Garden and flower seed. John G. Hartel, Keokuk, Iowa.
South St. Louis Nurseries. S. M. Bayles, St. Louis, Mo.
Fruits and Fruit Trees. Points for practical tree planters. Stark Bros. Nursery Co., Louisiana, Mo.
Oranges and Vegetables. Illustrated pamphlet published by the Bradley Fertilizer Co., Boston, Mass.
Descriptive catalogue of the Aspinwall potato planter. Aspinwall Manufacturing Co., Three Rivers, Mich.
Poultry Doctor, including the homoeopathic treatment and cure of chickens, turkeys, geese, ducks and singing birds. Fifty cents. Boerleke & Tafel, Philadelphia, Pa.

GOOD WORDS.

DELANO, CAL., Sept. 2, 1890.
I received the premium Sewing Machine about three weeks ago, all right, and after giving it a fair trial I can say it is one of the best, as well as the easiest running and simplest to understand, that I ever ran. I am extra well pleased with it. One like it would cost about \$60.00 here and that only cost \$21.00, including freight. Several neighbors that have seen mine talk of sending for one, too. Please accept my thanks.

MRS. FRANK BRENNAN.

CHASEBURGH, WIS., Sept. 22, 1890.
We received the Sewing Machine in good shape. Have given it a trial and are well pleased with it. We thank you very much and wish you success.

MEZZA MOORE.

SUNSET, TEXAS, Feb. 2, 1891.
I received the Peerless Atlas of the World in good order, and I think it is the best atlas I ever saw; would not sell it for \$5.00.

MARTHA WITTE.

MEADVILLE, PA., Feb. 10, 1891.
The picture, "Christ on Calvary," came to hand all safe this afternoon, and I had the frame all ready for it, so framed it as soon as I received it. Am well pleased with it. I have the pair, now.

W. J. MONFORT.

DOVER, MINN., Feb. 10, 1891.
We are in receipt of a beautiful copy of your Cook Book, which is highly appreciated by the housewife, as is your paper. Many thanks.

C. R. HILL.

TOLEDO, IOWA, Feb. 12, 1891.
I received the Peerless Atlas of the World a few days ago and must say I am very much pleased with it. I would not take \$5.00 for it, and don't see how I could get along without it.

BESSIE M. MCANULTY.

BEAVER CREEK, COL., Feb. 10, 1891.
I received the Peerless Atlas and am highly pleased with it, and think it is worth twice the money I gave for it. I cannot see how such a book can be published for the money. I hope you will have good success.

E. L. COFFMAN.

LOWELL, OHIO, Feb. 13, 1891.
I received your Peerless Atlas and am well pleased with it. Would not be without it for twice what it cost.

ANNIE EINGE.

PAINESVILLE, OHIO, Jan. 6, 1891.
I received the Modern Cook Book in good order. Thank you kindly for it. It is much nicer than anything I expected. Would not take a great deal for it if I could not get another.

MRS. CORA BOWHALL.

KING'S POINT, MO., Feb. 18, 1891.
The Sewing Machine I got from you one year ago is "singing" the right tune and is as good as the \$40.00 machines here. The freight was \$1, making it cost \$15. I cannot see why everyone cannot take advantage of such a bargain as this. Many thanks.

MARTHA A. HEISKELL.

'Planet Jr.'

Improved Farm and Garden Tools for 1891.

BETTER, Both Horse & Hand, THAN EVER; better and more money saving. We cannot describe them here, but our new and handsome catalogue is free and interesting. A goodly number of new tools will meet your eye there. Among these, Gardener's Harrow, Cultivator & Pulverizer, combined, adjustable teeth; Market Gardener's & Beet Grower's Special Horse Hoe with Pulverizer; Special Furrower, Marker and Ridger, adjustable wings; Sweet Potatoe Horse Hoe, four tooth with vine turner; Heavy Grass Edger and Path Cleaner; new Nine Tooth Cultivator and Horse Hoe combined; Special Steel Leveler and Pulverizer combined; all interesting, nothing we have ever made so practical or perfect. Some improved things too are grafted upon our older favorites. A capital LEVER WHEEL, instantly adjustable for depth, is a great feature; put on all '91 goods unless ordered otherwise. Nor have our Hand Seed Drills been forgotten in the march of improvement, nor our Double and Single Wheel Hoes, Garden Plows, Grass Edgers, Etc. Some of them are greatly altered for the better; yet do not forget that no novelties are adopted by us without actual and exhaustive tests in the field. We therefore guarantee everything exactly as represented. Send for Catalogues now. S. L. ALLEN & CO., 1107 Market St., Philadelphia, Pa.

Mention this paper when you write.

MORGAN

formerly called by us "TRIUMPH"

Angle of Teeth Adjustable to work at desired depth.

PULVERIZER

LATEST AND GREATEST IN THE WORLD.

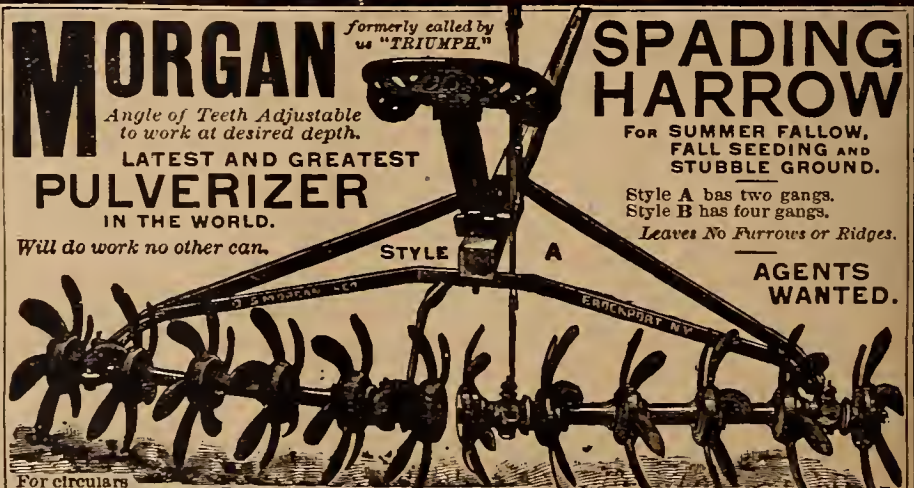
Will do work no other can.

SPADING HARROW

FOR SUMMER FALLOW, FALL SEEDING AND STUBBLE GROUND.

Style A has two gangs. Style B has four gangs. Leaves No Furrows or Ridges.

AGENTS WANTED.



For circulars and testimonials, write D. S. MORGAN & CO., Brockport, N.Y. Mention this paper.

Be sure to mention this paper when you answer this.

DON'T TRUST YOUR MOTHER-IN-LAW

IN A BUGGY OR ROAD CART ON A ROUGH ROAD unless it was bought from THE FOSTER BUGGY & CART CO., 32 Pike Bldg., Cincinnati, Ohio, the best and cheapest Buggy and Cart Emporium on Earth, who sell direct to the people at Factory prices. Write for prices before buying elsewhere.

Our Miscellany.

GARDEN SEEDS.

Good seed is one of the essential conditions of success in growing garden stuff, and to secure it is well worth considerable trouble and effort. Compared with the results, particularly with the great difference in the outcome of one kind of seed and of another, the greater expense of a reliable article is not worth taking into consideration. A few cents' difference in cost of seed may make many dollars' difference in the returns. When a whole crop and its quality is at stake, there is no wisdom in running the slightest risk for the sake of a small saving in the expense. Cheap seed is not necessarily poor; but poor seed is always a costly investment. The fact is that seed of a really first-class quality cannot be grown profitably at very low figures, and the only judicious course to follow is to buy of a strictly reliable source, and be willing to pay a reasonable price. Would you take a medicine that happens to be on hand, merely for the sake of saving it? It is no more foolish a proceeding than to use seeds because you happen to have them, or can get them at little or no expense. Never plant a seed of the superior character and quality of which you are not reasonably certain. Little difficulty will be experienced if anyone is anxious to purchase reliable garden seeds, since there are many firms of established reputation, whose goods can be depended upon for quality and purity. All the larger reputable houses send out no seed, except that of the purity and reliability of which they are tolerably sure, and only after testing and approving of its vitality.

PRINCIPLES OF GERMINATION.—Much stress has recently been laid upon the importance of using the feet in firming the soil over the newly-sown seed. I am inclined to deem the use of the head in seed sowing of still greater consequence. Anyone who has a thorough understanding of the principles involved, and follows the dictates of common sense in their practical application, will have no difficulty in getting live seed to germinate, whether he makes use of his feet in sowing the seed and firming the soil, or not. Yet, in a large number of cases the practice is decidedly commendable, and will often insure success where the unskilled would otherwise fail. What are these principles?

Moisture, a certain degree of heat (varying with different seeds), access of air and absence of light—these are the chief requirements. How can we best supply them?

The warmth generated by the sun rays is our chief reliance for the needed high temperature in open-air culture, without artificial assistance; and only in culture under glass do we resort to various devices to save, augment or supplement this heat, either by the prevention of loss through radiation from the soil, by sash covering alone, or in combination with additional artificial heat from fermenting manures, flues or pipes.

Constant but moderate supply of moisture is another chief point, and to insure it the seed should be bedded in mellow soil, and this packed around it just firm enough to bring it in actual contact with it, and facilitate and make sure of capillary action. If left loose over and around the seed, the capillary movement of the soil water would here come to a stop, the pulverized soil dry out on a sunny day and, depriving the seed of the needed moisture, prevent its germination, or kill the sprout, if this has already started into life. Excess of moisture should also be avoided.

On the other hand, the soil must not be compact enough above the seed to hinder the upward passage of the young sprout. This is a prolific cause of failure with seeds. While having considerable force, yet the tiny plants only too often choke and die because unable to penetrate a hardened crust of soil. This consideration makes it necessary that the ground be well prepared and thoroughly mellowed before the seed is sown, and that the latter be not placed deeper than would correspond with its vital force. Large seeds, of course, have greater life force, and for this reason can be planted deeper than small seeds, from which comparatively weakly sprouts are issuing.—From "How to Make the Garden Pay," by Joseph.

It has recently been demonstrated that some articles of merchandise, which have been before the public of England for the last half century, are nine times more used there than all other principal patent medicines put together. We refer to Beecham's Pills, which in order to meet the wishes and requirements expressed by Americans, many of whom already know their value, are now introduced in such a thorough manner that no home need be without them in America. These pills are round and will therefore roll. They have already rolled into every English-speaking country in the world, and they are still rolling. All sufferers from indigestion, flatulency, constipation and all other forms of stomach and liver troubles have now this famous and inexpensive remedy within their reach; but should they find, upon inquiry, that their druggist does not keep BEECHAM'S PILLS, they can send twenty-five cents to the General Agents for the United States, B. F. Allen & Co., 375 Canal Street, New York City, who will promptly mail them to any address.

ESTIMATED QUANTITIES OF SEED REQUIRED FOR THE SPACES GIVEN.

Asparagus—1 ounce produces 1,000 plants, and requires a bed 12 feet square.
Asparagus Roots—1,000 plants, a bed 4 feet wide and 225 feet long.
English Dwarf Beans—1 quart plants from 100 to 150 feet of row.
French Dwarf Beans—1 quart plants 250 to 350 feet of row.
Beans, Pole, Large—1 quart plants 100 hills.
Beans, Pole, Small—1 quart plants 39 hills, or 250 feet of row.
Beets—10 pounds to the acre; 1 ounce plants 150 feet of row.
Broccoli and Kale—1 ounce plants 2,500 plants, and requires 40 square feet of ground.
Cabbage—Early sorts, same as broccoli, and requires 60 square feet of ground.
Cauliflower—The same as cabbage.
Carrot—1 ounce to 150 feet of row.
Celery—1 ounce gives 7,000 plants, and requires 8 square feet of ground.
Cucumber—1 ounce for 150 hills.
Cress—1 ounce sows a bed 16 feet square.
Egg Plant—1 ounce gives 2,000 plants.
Endive—1 ounce gives 3,000 plants, and requires 80 feet of ground.
Lettuce—1 ounce gives 7,000 plants, and requires seed bed of 120 feet.
Melon—1 ounce for 120 hills.
Nasturtium—1 ounce sows 25 feet of row.
Oatmeal—1 ounce sows 200 feet of row.
Okra—1 ounce sows 200 feet of row.
Parsley—1 ounce sows 200 feet of row.
Parsnip—1 ounce sows 250 feet of row.
Peppers—1 ounce gives 2,500 plants.
Peas—1 quart sows 120 feet of row.
Pumpkin—1 ounce to 150 hills.
Radish—1 ounce to 100 feet.
Salsify—1 ounce to 50 feet of row.
Spinach—1 ounce to 200 feet of row.
Squash—1 ounce to 75 hills.
Tomato—1 ounce gives 2,500 plants, requiring seed bed of 80 feet.
Turnip—1 ounce to 2,000 feet.
Watermelon—1 ounce to 50 hills.

THE Romans etched their public records on brass.

On the dried skin of serpents were once written the Iliad and Odyssey.

FROM the remotest times men saluted the sun, moon and stars by kissing the hand.

THE mean term of human life has gradually increased in the last fifty years from thirty-four to forty-two years.

THE army of France shows up at nearly 4,000,000 strong and costs about half as much per year as our pensions.

THE water system of the Amazon affords not less than 30,000 miles of free navigation within the great Brazilian territory.

THE body of a petrified man, found in a canyon in Fresno county, Cal., has been sold for \$10,000, for purposes of exhibition.

FLUTES found in the pyramids of Egypt, played three thousand years after burial, show that the Egyptians had our scale.

THE pumice stone was a writing material of the ancients; they used it to smooth the roughness of the parchment, or to sharpen their reeds.

THE great authority, Renel, puts Croesus's wealth at \$2,000,000,000. Solomon's is estimated by some sacred historians at \$8,000,000,000. None of 'em know.

Send two-cent stamp for Dr. H. James' receipt of imported hemp for the positive and permanent cure of Consumption and Bronchitis. Craddock & Co., 1032 Race St., Philadelphia, Pa.

DENTIST—"A dollar, please." Patient—"A dollar for just a minute's work? The last dentist who pulled a tooth for me dragged me around his shop for half an hour and broke the tooth off twice, and he charged me only seventy-five cents."—Chicago Post.

"Cheap Lands and Homes in Kentucky, Tennessee, Georgia, Alabama, Mississippi and Louisiana" is the title of a Pamphlet issued by D. G. Edwards, Cincinnati, Ohio, General Passenger and Ticket Agent Queen & Crescent Route, containing correct County map of these States. Mailed free on application, to any address.

SINCE Queen Victoria's accession, the present royal family of England has cost the nation the considerable sum of \$173,113,115. Of this amount about \$125,000,000 has been spent toward maintaining the state and household and toward filling the Queen's private purse.

BEECHAM'S PILLS cure Sick-Headache.

THE LONGEST DAY.

The longest day of the year has nineteen hours at St. Petersburg, seventeen hours at Hamburg, sixteen and one fourth hours at London, fifteen hours at Philadelphia and three and one half months at Spitzbergen.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Brouchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 520 Powers' Block, Rochester, N. Y.

WE WANT A NAME FOR THIS NEW TOMATO

UNTIL a suitable name is suggested we shall call this Tomato No. 400. Read terms of competition below.

The No. "400" is the largest and heaviest Tomato known. In fact it is so solid as to be almost seedless. Color, rich, dark, crimson.

AND WILL PAY

\$ 250.00

FOR IT

The out shows fruit one third natural size.

WE WILL PAY \$250.00 IN CASH.

For the best name suggested for this New Tomato.

Purchasers are entitled to send in a name for each and every packet they buy. The names can be sent in any time before October 1st, 1891, and will be considered by a disinterested committee of three, who shall award the prize. Full directions for entering the names for competition given on every packet of seed.

Price of New Tomato No. "400," 25 cts. per packet, free by mail.

With every order for a packet or more, we will also send free our magnificent New Catalogue of "EVERYTHING FOR THE GARDEN" for 1891, (the value alone of which is 25 cts.), on condition that you will state where you saw this advertisement.

PETER HENDERSON & Co. GORTLANDT ST. NEW YORK

THE total length of the streets, avenues, boulevards, bridges, quays and thoroughfares of Paris is set down at six hundred miles, of which nearly two hundred are planted with trees.

LARGE quantities of gold are used every year for ornamental purposes. In England \$250,000,000 is used in the shape of plate, jewelry, etc., but \$50,000,000 less than the amount of gold used for monetary purpose.

THE most ancient mode of writing was on bricks, tiles, oyster shells and on tables of stone; afterward on plates of various materials, on ivory, on barks of trees, on leaves of trees.

A RECENT survey has established the number of glaciers in the Alps at 1,155, of which 249 have a length of more than four and three quarter miles. The French Alps contain 144 glaciers, those of Italy 78, Switzerland 471 and Austria 462.

THE scheme of Pundita Ramabal to rescue the child-widows of India, for which she enlisted substantial sympathy by her lecture in this country a year or two ago, is not proving as successful, it is said, as she and her friends hoped it would. A reform which strikes at one of the greatest social weaknesses of caste-bound India cannot, however, be expected to travel with railroad speed. If, in these early days of its inception, it attains the momentum of Juggernaut's car, it will be a cause for hopefulness.

THERE are about seventy-five thousand persons in prison in the United States. There are at least as many more persons out of prison who belong to the criminal class, making one hundred and fifty thousand criminals, or one for every four hundred inhabitants.

MRS. CHARLOTTE FOWLER WELLS is president of the Fowler & Wells Publishing Co., and the only surviving member of an organization founded by her brothers, the well-known phrenologists, more than half a century ago. Mrs. Wells, who is now seventy years of age, successfully conducted the establishment through a period of great financial depression, during the war, and, until lately, has read the manuscripts and proofs of all the books and periodicals bearing the imprint of her house.

If a box six feet deep were filled with seawater and allowed to evaporate under the sun, there would be two inches of salt on the bottom. Taking the average depth of the ocean to be three miles, there would be a layer of pure salt 230 feet thick on the bed of the Atlantic.

WHITE women missionaries to the women of New Zealand are responsible for a great loss of life among their Maori converts. The missionaries insisted that the Maori women should wear clothing, and the latter, unable to overcome their prejudice against skirts, have compromised by adopting the corset, which they observed the missionaries wore. The result is that every Maori woman goes about her daily work clad in a corset laced as tightly as the united efforts of half a dozen stalwart warriors can lace it, to the ruin of her health and the loss of life itself in many instances.

A REMARKABLE PRODUCTION.

Our latest edition of the Peerless Atlas is being mailed to thousands of subscribers. The Atlas has been greatly improved, making it by far the best atlas ever offered for the money. It gives the population figures of the census of 1890. 32 pages have been added, giving room for additional reading matter, as well as hundreds of handsome illustrations. A number of new maps are published in this edition for the first time. See our offer on page 194.

We have 2000 Acres farm land. Price \$10 per acre. We will, to a party of three or more, furnish all the land they can use for five years, rent free; furnish lumber for buildings and contract to sell at end of lease. It will pay you to get up a party and send representative here. C. C. FOLLMER & CO., GRAND RAPIDS, MICH.

Ask your Dealer for this Brand of Shingles.

We sell at WHOLESALE PRICES BUGGIES, CARTS & WAGONS.

CAN SAVE 1 YOU Over 30 per Ct. Any vehicle shipped subject to examination before paying one cent. What more can you ask? Send 2c. stamp for illustrated 48-page catalogue and price list. COLUMBIA BUGGY CO., 64 to 74 Willard St., Kalamazoo, Mich.

WARRANTED THE BEST Practical Stump Puller made. BENNETT'S IMPROVED STUMP PULLER Sent anywhere in the U. S. On Three Days Trial. On runners. Worked by 2 men. LIFTS 20 to 50 TONS. Five sizes. Price, \$35 to \$70. Circulars free. Man'd by H. L. BENNETT, Westerville, O.

THE ENGLISH PLAN

of furnishing small amounts (\$50 to \$500) on ten years time, to honest persons, fully explained free. State age, occupation, and amount desired. Also, our SALARY feature, allowing \$3.00 per day and expenses for all or part of time, for taking up our announcements everywhere on trees, telegraph poles, fences, etc., and over-seeing our local interests. Whatever may be your circumstances; old or young, rich or poor, idle or busy, write us candidly, enclosing a stamped envelope addressed to yourself and name two references who will answer our enquiries about you. "Knowledge is Power." DETROIT L. AND F. CO., 63 Buhl Block, Detroit, Mich.

THE LOWER BRAIN.

A woman doctor of Chicago, after a long residence in that city, has written an able tractate, entitled "The Abdominal Brain." She insists that the brain (from her experience) lies quite as largely in the abdomen as in the head. This is a new view of anatomy, viewed from a local standpoint. It explains a great many facts concerning our sister city, and should be taken into consideration in estimating some eccentricities connected with her press, pulpit and bar. But it is more likely a very general phenomena that explains the devotion which a large share of humanity pays to the stomach and its pleasures. Their brains are there.—St. Louis Globe-Democrat.

LIVING FOR CENTURIES IN A SOLID ROCK.

The dislodgement of live bats and toads from solid limestone or coal seems to have so often occurred as to need no more proof of the fact. The possibility of a suspension of animation for great periods of time is certainly possible in the case of some creatures. Recently a live bat was dug out in Romney, W. Va., by men quarrying rock. The hole in the stone was only large enough for the bat's body. A case occurred at Barton, Md., when the superintendent of the mines had a plaster cast taken of the cavity. The bat was found one mile from the mouth of the mine, and 200 feet from the surface above. Those who have been in caves and witnessed the enormous congregation of bats will not wonder that they should become imbedded at times; but that they should retain vitality for years and ages is the miracle. It now remains for man to find out if this power of the lower creatures is totally lost to those of a higher organic and functional rank.—St. Louis Globe-Democrat.

Smiles.

IN THE DARK.

The hall was dark. I heard
The rustle of a skirt.
"Ha, ha!" thought I, "I'll catch
You now, my little flirt!"

Softly I sallied forth,
Resolved when I had kissed her,
That I'd make her believe
I'd thought it was my sister.

The deed was done. Oh, bliss!
Could any man resist her?
Apology was made—
Alas, it was my sister!

—George Birdseye, in Judge.

FOREBODINGS.

When Women's Rights have come to stay,
Oh, who will rock the cradle?
When wives are at the polls all day,
Oh, who will rock the cradle?
When Doctor Mamma's making pills,
When Merchant Mamma's selling bills,
Of course, 'twill cure all woman's ills,
But who will rock the cradle?

When mamma to the court has hied,
Oh, who will rock the cradle?
She has a case that must be tried,
But who will rock the cradle?
When Captain Mamma walks her decks,
When Banker Mamma's cashing checks,
When all our girls have lost their sex,
Must

PAPA

Rock
The cradle?

HIS LIGHT PUT OUT.

He had worn a colored blazer on the Nile;
He had sported spats in Persia, just for style;
With a necktie quite too utter, in the streets
Of old Calcutta, he had stirred up quite a
flutter for a while.

The maids of Java thronged before his door,
Attracted by the trousers that he wore.
And his vest, a bosom venter, shook Formosa
to its center; and they hailed him as a
mentor by the score.

On his own ground, as a masher on the street,
He outdid a Turkish pasha, who stood treat.
He gave Shanghai girls the jumps, and their
cheeks stuck out like mumps, at the patent
leather pumps on his feet.

But he called upon a Boston girl one night,
With a necktie ready made, which wasn't
right;
And she looked at him, this maid did, and he
faded and he faded, and he faded and he
faded out of sight.

—Tom Masson.

NOT THE ODOR OF SANCTITY.

THE rector of one of our most wealthy
and fashionable congregations was
seated with his family at the Sunday
dinner-table, deeply engaged in a
discussion as to the probable cause of
a peculiar and unpleasant odor which
had permeated the church during the last few
services. After the inquiry had completely
exhausted the subject of drains, defective
plumbing and insufficient ventilation, a
youthful scion broke out with:

"Say, you don't suppose we could smell those
chickens, do you?"

"What chickens do you mean, Robby?"
asked his father.

"Why, you know; the chickens that the
new sexton is raising in the cold-air box of
the furnace."

MUSTACHE TRAINER.

One of the latest novelties for gentlemen is
a mustache trainer. It may be styled a com-
panion to the feminine curl paper. It is made
of a plate of thin metal, shaped like the mus-
tache, and is to be worn at night. The inventor
is from Paris, and it is said that a great many
are already in use in New York.

THE LESSER OF TWO EVILS.

"James," exclaimed the proprietor of the
store, angrily, "put that glass cover back on
the limburger cheese."

A customer came in smoking a cigarette.
"James," vociferated the proprietor, "take
that cover off the limburger cheese again!"

TRULY PRUDENT.

Ethel—"I know he is a speculator, but he is
not a speculator."

Maude—"How do you know?"

Ethel—"He didn't buy our engagement ring
until he was quite sure that I would accept
him."

FREE COINAGE HIS FORTE.

"On this financial question, are you in favor
of the free coinage of silver?" asked a pas-
senger on the Erie road, of his neighbor.

"In favor of it? Why, sir, I've done seven
years twice and five years once for it!"

A \$4.00 BOOK and this paper one year,
for only 70 cents. Or, the
book and Farm and Fireside and Ladies Home
Companion, both one year, for only \$1. The
book will save \$100.00 a year to your household,
or you can make a fortune from it. Read our
offer on page 194.

NO FUN IN PUNS.

"No, I can't see any fun in playing on
words," said the man in the big mackintosh,
gloomily. "A pun once cost me \$100,000."

"How was it?"

"You needn't gather around me; it isn't
much of a story. A fat, old aunt had come to
visit us. They told me to go in the parlor and
pay my respects. I was a very smart young
man. I went in and told her in a cheery, off-
hand way, that I had come in to make my
obsequies to my obese aunt. That's all there
is of it."

"But how about the \$100,000?"

"She left it to her other nephew."—Chicago
Tribune.

ENTIRELY SPOILED.

Mrs. Porkupine (of the West)—"Now, there
is a charming imported vase. I must buy it at
any price."

Dealer—"It's a very fine piece; but it is of
domestic manufacture, and exceedingly cheap
—only \$10."

Mrs. Porkupine—"Do you mean it?"

Dealer—"Certainly, madam."

Mrs. Porkupine—"What a shame! And so
lovely!"—American Stationer.

A WOMAN'S REASON.

Laura (at the play)—"I wonder why Booth
isn't with Barrett this season?"

Jean—"Why, don't you know that Booth is
giving all his time to that wonderful Salvation
Army of his, and to his plan for helping the
London poor? Why don't you read the papers,
dear?"—Pittsburgh Bulletin.

AN UNKIND SUGGESTION.

Higgins—"I've got a new idea for a book.
I'm going to write the autobiography of a
horse."

Tiggins—"You could write the autobiography
of a donkey better, I think."

ALL HOPE ABANDON.

Poet (meekly)—"I should like to leave this
little poem for your inspection. I suppose a
great many poems are left here."

Editor (gruffly)—"Yes, and so are the fellows
who want us to buy them."

A PLEASANT PROSPECT.

"How is your new home coming on?"

"First rate. We've got the roof and the
mortgage on. I think we shall have the fur-
nace and the sheriff in before the year is out."

A HALF MEMORY.

Teacher—"Who discovered America?"

Street gamin (after deep thought)—"I disre-
member his name, but he was a Dago."—New
York Weekly.

A REVERSIBLE PROVERB.

She—"Riches take wings."

He—"Yes, and the wings you wear in your
hat takes riches."

SOMEWHAT MOLDY.

Greene—"Gibson is fond of ventilating his
opinions, isn't he?"

White—"Yes; and the Lord knows most of
'em need it!"

LITTLE BITS.

Job was probably the most precocious child
on record. He cursed the day that he was
born.

Absalom was one of the first men on record
to be "held up" while going through the
woods.—Light.

Father (looking over the paper)—"More bad
news! A hitherto unknown frog pond has
been discovered in central Africa." Mother—
"What is that to us?" Father—"What is that
to us? It means that every one of our eight
children will have to have a new and revised
edition of Highprice's geography."

It is reported that, fired by the medical
exploits now going on all around, some prom-
inent physicians of the country are consider-
ing the feasibility of grafting thought-germs
on average brains. The experiment, if success-
ful, will dispose of pre-natal and hereditary
influences, and enable a man to be inoculated
with literary, artistic, scientific or professional
tastes, at pleasure.—Baltimore American.

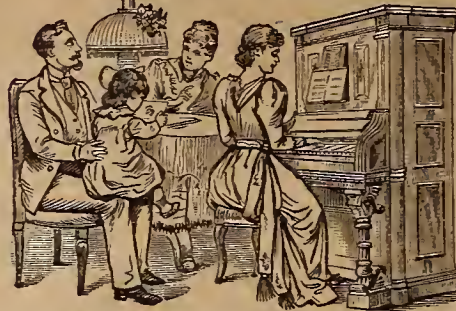
"Yep," said old man Dunlap, "I'm member
jest as well when the first caravan came
through these parts. 'Twas forty-three years
ago last grass. They had the first elephant
ever seen hereabouts—ole Bollivar—an' I tell ye
he was a buster! After they had got through
their performin', ole Bollivar got loose and
went rampagin' round the neighborhood, an'
finally brought up down back o' Si Pettingill's
haystack. Si'd never seen an elephant, an'
next mornin' when he turned the corner of
his stack an' run smack up in front of ole
Bollivar, I tell you it s'prized him some! He
jest stopped, throwed up both hands an'
hollered: 'Gosh all hemlock, what a toad!'
an' put for the house."—Puck.

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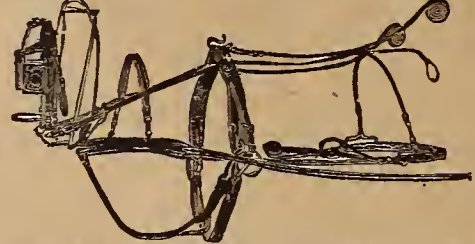
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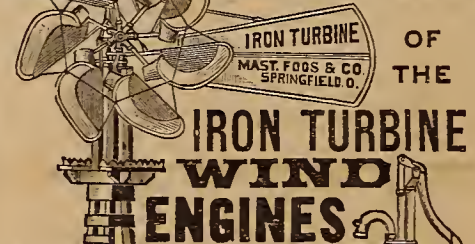
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for a like purpose, and no scientific discovery ever attained such wonderful results. IT CAN
NOT FAIL. If the growth be light, one application will remove it permanently; the heavy
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injury or unpleasant feeling when applied or ever afterward. MODENE SUPERVESSES ELECTROLYSIS.

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private parlor, by what appeared the terrific barking of a dog, then
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from the interior of a large book case, and a beautiful bird com-
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Selections.

GREAT EATERS.

THE Russians eat, on an average, says a contemporary, once in every two hours. The climate and custom require such frequent meals, the digestion of which is aided by frequent draughts of vodka and tea. Vodka is the Russian whiskey and made from potatoes and rye. It is fiery and colorless and flavored with some extract like vanilla or orange. It is drunk from small cups that hold, perhaps, half a gill. Vodka and tea are the inseparable accompaniments of friendly as well as of business intercourse in the country of the czar. Drunken men are rare. Russia and Sweden are the only countries in which the double dinner is the rule. When you go to the house of a Russian, be he friend or a stranger, you are at once invited to a side table, where salted meat, pickled eel, salted cucumbers and many other spicy and appetizing viands are urged upon you with an impressiveness that knows no refusal. This repast is washed down with frequent cups of vodka. That over, and when the visitor feels as if he had eaten enough for twenty-four hours, the host says: "And now for dinner."

HOW TO BOIL AN EGG.

"Isn't it strange," said a short, foreign-looking man the other day to some companions, while lunching together at one of the restaurants, "that not one cook in fifty, nor housekeeper either, knows how to boil an egg? And yet most people think they know this simple matter. They will tell you to drop it into boiling water and let it remain three minutes, and to be sure the water is boiling. Here is where the mistake is made. An egg so prepared is indigestible and hardly fit for a well person, let alone one who is sick, to eat. The moment it is plunged into boiling water the white hardens and toughens. To boil an egg properly, put it in a vessel, cover with cold water, place over the fire and the second the water begins to boil your egg is done. The white is as delicate as a jelly and as easily digested and nutritious as it should be. Try it."—Chicago Tribune.

ROUND SHOULDERS.

Round shoulders are almost unavoidably accompanied by weak lungs, but may be cured by the simple and easily-performed exercise of raising one's self upon the toes leisurely, in a perpendicular position, several times daily. Take a perfectly upright position, with the heels together and the toes at an angle of forty-five degrees. Drop the arms lifelessly by the sides, animating and raising the chest to its full capacity muscularly, the chin well drawn in. Slowly rise upon the balls of the feet to the greatest possible height, thereby exercising all the muscles of the legs and the body; come again into the standing position without swaying the body out of perfect line. Repeat this exercise first on one foot and then on the other.

FLORIDA CAMPHOR.

According to a paper read by Professor Maisch, at the October meeting of the Philadelphia College of Pharmacy, the camphor tree is being cultivated successfully in Florida. (*American Journal of Pharmacy*, Nov., page 565.) It seems to flourish in almost any soil and the tree grows rapidly. It is believed that in ten years time there will be more camphor trees than orange trees in Florida, and that the camphor industry will prove to be more profitable than that of sugar. The camphor obtained from the Florida trees approaches more nearly to that of Japan than to Chinese camphor, since the odor of safrol is distinctly recognizable.

When a new minister comes to a town he is "called." When he leaves it he is often called, too; but just what he is called we decline to state.—*Yonkers Statesman*.

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THE BROOK IN WINTER.

Under the sparkling snowdrift,
Screened from the light of day,
Merrily sings the brooklet
Its flowery springtime lay.

Flowing in ice-bound darkness,
Its murmurous spirit knows
A subtle sense of the trembling
Reflection of spring's wild rose.

—R. K. Munkittrick, in the *Traveler's Record*.

FASHIONABLE WRAPS.

A ladylike model for a long cloak (see Fig. 6) is made from figured camel's hair,



FIG. 6.

lined throughout for warmth. The comfortable high collar, cuffs, muff and simulated fichu (continued to trim the skirt of the garment) are of Persian lamb. One of last season's garments, with the addition of new trimming arranged as shown, would pass muster as a new cloak. The arrangement of the Persianer over the shoulders is especially calculated to hide

the tops of sleeves not full enough or high enough to be in style.

A handsome carriage cloak of silk and wool matelasse in crimson and black, has loose fronts and a half fitted back. It is lined throughout with white Angora fur, and trimmed about the hands, around the neck and down the fronts with the long, fleecy, Japanese llama.

A useful cape is provided with two collars, one of medium height, the other in the form of a deep, rolling collar, forming revers in front, which can be turned up about the ears in very cold weather, in driving, etc.

YOUNG LADIES' CLOTH COSTUME.

A fashionable promenade costume, after a French design, is shown in Fig. 5. The long, polonaise-like coat is made of cheviot in checks of beige and navy blue; it is double-breasted and fastens invisibly on the left side. Below the waist line at the back there are two fluted puffs. Plain, navy-blue velvet is used for cuffs, collar band, and to simulate an under robe just disclosed by the fur that borders the opening. The fur used is black skunk fur, to match the muff. The blue beaver hat is trimmed with a drape of beige-colored faille, finished with upright ends and caught down with fancy pins. Shaded ostrich feather.

CHILDREN'S FASHIONS.

Simplicity of a very sweet and charming fashion obtains in children's garments, which may be expensively dainty or inexpensively pretty, but which must be comfortable.

Among the new bonnets for little girls is one in "granny" shape (see Fig. 1), with gaffered (plaited) curtain protecting the neck at the back, and turned up brim. The model is of white faille, faced with pink plush and edged with gold galon and a band of pink feathers. These feather bands may be bought in all shades for use in millinery, bodice trimmings and so on. Pink ribbon is twisted around the crown and under the brim, ending in a few loops.

A pretty party dress for a school-girl is developed in cream nun's veiling, drawn with several full gathers around the waist, and ornamented on the skirt with rows of cream insertion. The full sleeves are of nun's veiling, covered with cream lace. A deep frill of the lace, with a little heading, forms a yoke-like collar on the waist. Cream ribbon, Nile green or rose-pink ribbon is tied around the arms and fastened with a butterfly bow on the shoulder.

A comfortable little house frock for his small lordship is made from a patterned flannel or cashmere (see Fig. 3, a). It is a one-piece dress, made over a waist lining. The front is cut entire from throat to knee, plaited and smocked at the waist line. The back is made in the same style. The under-arm pieces are plain to the belt, below which the skirt breadths are gathered slightly, the belt covering the seam.

A simple dress for a girl from four to six has a collar and round yoke of Marguerite red velvet, with a soft, wool robe below it in which mignonette shades predominate. The dress is shaped under the arms, the fullness of the front being confined by the girdle. Front and sides (in one) are cut on the bias; the back of the dress is laid in three box-plaits from the yoke to the bottom of the skirt. The sleeves are moderately full and set up high on the shoulders (see Fig. 3, b.)

A princess gown for a maiden from seven to ten years old is shown in Fig. 3, c. Various materials are suited to this mode, the selection depending on whether the dress is designed for every-day or less frequent wear. The fronts hang loose from the shoulder, the under-arm seams being faced throughout with lining to correspond with the outside. This is a good model for using up the odds and ends of embroidery or pretty, soft silks to be picked up at this season at reduced prices. The back is cut whole, from neck to foot, with plaits in the seams below the waist line.

Boys from four to seven look well in paletot and cap, shown in Fig. 4. Brown

cloth is used for the coat and the crown of the cap; the brim of the latter and the coat cuffs and collar are made from astrakhan. Buttons, covered with astrakhan, and silk-cord loops fasten the partially double-breasted fronts.

STYLISH CLOTH PRESSES.

Pattern robes are made up into stylish gowns for day wear. These are imported at all prices and in a great variety of styles and colors. Soft camel's hair suitings in the rich, deep-hued, dahlia shades are many of them handsomely embroidered in harmonizing tints, with silk outlined upon velvet scrolls, giving every appear-



FIG. 1.

ance of beautiful handwork applique, although it is all done by machinery and consequently is a deal less costly than the simplest handwork could be. The usual distribution of this embroidery upon the pattern robe is to provide the front of the skirt, the sleeves and some bodice trimming.

A pretty and serviceable pattern robe, imported to sell at \$25.00, and marked down to \$10.00 because it arrived late in the season, is a blue serge, a portion of which, intended for the skirt, is horizontally striped in small, close cords of uncut black velvet, woven into the goods.

A plain skirt, polonaise back and basque front overdress, blocked along the edges and bound with black velvet, with revers of the goods on either side of a black silk, pointed vest, makes a modish gown. A blue cloth coat, black hat and gloves complete the costume.

A lovely dress for an elderly woman is a combination of gray moire and velvet of the same shade. The trained skirt is of moire; the tablier, plastron and upper part of the sleeves are embroidered all over with pale, silver-gray silk and white.

Among the chic gowns for young ladies for afternoon tea and reception wear, is one of ivory-white woolen mixed with white peau de soie, and trimmed with a narrow band of marten fur around the edge of the skirt, also around the neck, wrists and corsage, the latter simulating a small jacket, opening over a long waistcoat, also bordered with a narrow edge of fur.

A large felt hat, trimmed with long ostrich feathers the shades of the fur, and velvet ribbon loops and bows, and a tiny shirred muff of marten-brown velvet to match, complete the toilet. To wear with this gown there must be a long wrap, lined with white or a pale tint, which is thrown aside, of course, before entering the drawing-room.

OLD GOWNS.

A correspondent who has an "old, red silk dress," asks what to do with it, the silk, "what there is of it, being good," and she wants it for a "dress-up" dress. Combine it with silk of the same shade (or one that harmonizes with the old silk), spotted with large wafers of green velvet. Make a slightly trained skirt of the plain silk, facing the front and sides of the skirt about the bottom upon the right side with ten-inch-deep vandykes (inverted V's joined together) of the spotted silk, and border the edges with green ostrich feather bands. Border the train with the feather band. Have a long casque (a close-fitting sacque), with square pockets over the hips, opening over a plain, red vest. Have full puffs of the spotted silk over plain sleeves

of the red silk. The collar of the casque, high and flaring at the back, and faced with green velvet. Inside is worn a standing collar and square bib of Renaissance lace, with some small shells peeping from between the opening through the middle of the bib, of white silk muslin.

Another asks what to do with a light-weight, black, whipcord jacket, and a tan-colored Henrietta dress with velvet sleeves, too dismantled for use as they are. Rip the dress apart carefully and have it dyed black. It pays to have this work done by a professional, if the material is nice. Rip up the jacket, and if it is like most whipcord, when sponged and pressed the wrong side will be a good-looking twilled material. This will make a nice bodice, with the addition of a little trimming. The Henrietta will make nice skirts, the style depending upon the way in which the skirt was previously cut. Cuffs, collar and vest of the Henrietta, braided with silk braid, would be a stylish finish for the waist, or the whipcord could be made into a jacket bodice, opening over a silk waistcoat or softly-folded vest. The velvet in the sleeves of the old dress, if not too much worn, can be dyed and restored and used upon the waist or perhaps for hat trimming.

HINTS FOR THE HOME PRESSMAKER.

The "lines" of a dress are very much discussed nowadays in dressmaking. The wise woman in matters of dress looks you over and says: "The lines of your dress are good;" or the reverse. She means that the design is artistic and suited to your figure, that the curves are in true proportion, and so on.

Fashion has always been blamed for what was really the lack of intelligence on the part of her would-be followers. With their dawning intelligence that there are fashions and fashions, enough for all and to spare, something to suit everybody, individuality is working to the fore, and the lines of one's gown are designed or adapted to suit, not a fashion-plate figure, but herself.

The general design counts far more for or against the success of a dress or garment than the fabric used.

The skillful dressmaker proportionates the various forms of the basque or polonaise for a stout woman so that no one or two forms shall be unusually wide. She carries side-back forms to the shoulder, instead of to the arm-hole, and as often as possible induces the customer to wear a gown that has the under-arm forms cut in one piece from arm to foot, and fitted to



FIG. 4.

the figure smoothly over the hip. A becoming mode of arranging applied trimming, as wide passementerie, feather or fur trimming, where it is desirable to increase the apparent height of the wearer, is to have one continuous line from throat to hem (see Fig. 5.)

Where the dress is made with skirt and basque, the trimming can be used to border the skirt drapery, left loose from the edge of the basque and hooked into

place after the dress is put on. If fur or feather trimming is put on in this way, the foundation of the part of the trimming that has to be hooked into place should be faced with a bias fold of silk or a piece of ribbon.

The very long sleeves, that fit closely between the elbow and the wrist, are fastened with buttons and silk loops, made by button-holing with coarse twist, a double loop of the requisite size. The wrist and the edges of the opening are faced with stiffened lining muslin under the silk facing. All waist seams are now pressed open, and in nice dresses each side is bound with lute string. Twilled galloon (five cents per yard) is gathered slightly on the open seams for the bones; and every seam is boned, the whalebone being shaped to fit the curve of each seam by a hot iron, often being dipped in water.

The newest basques are much longer than for several seasons; the "basque," which, properly speaking, is the portion below the waist line, being in many cases cut separately and seamed onto the waist after the fashion of men's Prince Albert coats. The lower edges of an attractive cloth basque are cut in square tabs and bound. Before this is done the bottom of the basque should be faced with muslin, under the silk facing.

The neatest way of putting the belt on

stitched down upon each edge. Fashionable dressmakers who take pride in the finishing of work that goes from their hands, make the belt, pocket and all facings of satin.

Basques ending in long points at the

Some pretty little capotes are being made without crowns, consisting of a bandeau of velvet—red, blue, yellow, as the case may be—resting on the hair, and a second one of gold, studded with (imitation) precious stones. An aigrette, either white



a b c
FIG. 3.

back are weighted in addition to being boned, to keep them in place. A wide bone shaped like a corset-steel, minus the fastenings, is covered with satin and oversewed along the under edge of the button side of the basque to keep it from sticking out, and also to prevent it wrinkling, as it will do when boned in the biases and not down the front.

PARIS LETTER.

The women of the present day have a vast choice of rich and varied materials wherewith to adorn themselves, writes Eliane de Marsy from Paris. There are the crepes, embroidered in Oriental style with gold beads and shaded silks; silk lace with velvet flowers and jewels, the wonderfully rich, raised gold work on shot velvet. Also, black brocades with large flowers, outlined with gold and jetted net over, or the same design in soft colors, such as tea rose, opal blue, covered with tulle to match, dotted with crystal or gold beads. There is black lace, with bayadere stripes (horizontal) of moire ribbon, edged with jet and emeralds; and crepes de Chine in all the exquisite pale shades of sky blue, rose de Chine, aurore, vert de Nil (Nile green), embroidered with gold forget-me-knots or rosebuds, with a silk centre that shines like precious stones—a style of work that elevates the price to about \$800. Lastly, there are velours du Nord, and plush, rich and thick as seal-skin, in such colors as feu, ruby, emerald green, etc.; and this material, beautiful in itself, is enhanced with superb gold marvelously worked in pearls, opals, rubies, emeralds, turquoises and diamonds (imitation, of course, but extremely good), or else trimmed with feather border, which is soft and becoming, or expensive furs, or ruches of mousseline de soie with gold picot (purl) edge.

Never have manufacturers attained such perfection, such variety, and by way of parenthesis, such costliness. But according to persons of true taste, all this imitation jewelry is only fit for the stage, or for those who do not possess family jewels. The *creme de la creme*, *n'importe quel pays* (the most elegant people, no matter where), do not deck themselves out thus. The rage for this mock jewelry has also been carried out on the bonnets.

or to match the velvet, is placed in front. These dressy little capotes are also made with a kind of large butterfly placed in front in diadem style, the wings folded back to rest on the hair; this, with an edge of black and pink curled feathers, two tufts of pink feathers and a small bow of gold ribbon in front, below the butterfly, comprise the dress bonnet of the moment. The doctors would call them a neuralgia trap at this season. Sometimes a *plesse* (plaiting) of pink crepe is used instead of velvet to support the bandeau of imitation jewelry. These stones are very effective at night, nesting in feathers and crepe, and showing off the wavy hair on which they rest, for *frise* (curled) or *ondule* (waved) hair is now demanded by fashion.

HERE, THERE AND EVERYWHERE.

Some of the newest theatre wraps are made in half length.

Ultra-fashionable women are having one-button gloves made to wear with the very long-sleeved gowns that are so fashionable.

A new muff of sealskin has gauntlet-like pieces added about the openings for the hands, which give the wearer the appearance of having on deep gauntlet gloves. It is exceedingly comfortable.

Artificial flowermakers in Paris earn from two to three shillings a day; but there is a long slack season. Fanmakers, in some instances, in Paris, earn as much as four shillings per day; and a good dressmaker, working by the day in private houses, earns about the same, if she does not have meals. But seamstresses (dress-makers or whiteworkers) earn from two shillings, six pence (forty cents), down to one shilling a day; and there is a season of at least two months in which there is no work at all.

A fashionable fancy is to have one's card-case, purse and gloves made to match.

Fetching evening dresses, made low-necked, have long sleeve puffs attached to the bodice only half of the way around, exposing the upper part of the arm.

Those who have tried having two pairs of everyday boots, wearing them alternately, and using a little vaseline in place of blacking, are amazed at the difference in their durability over two pairs bought singly.

English dealers in ladies' underwear show new woolen night gowns, made of a pretty pink tone, which wash well. They are trimmed with torchon lace, and the sleeves are full and high on the shoulders.

ANSWERS TO CORRESPONDENTS.

"CONSTANT READER."—Your inquiry about "old, red silk dress" is answered in another column.

"SANDY."—The majority of the illustrations in the fashion department of the COMPANION are from designs furnished by leading French and English dressmakers.

"MARY, QUEEN OF SCOTS."—You have chosen a character for the fancy ball that must be handsomely dressed to be a success. The dress should be a plain skirt, open in front over a white satin petticoat, quilted with pearls, velvet bodice filled in at the throat with a satin habit shirt; close ruff around the throat, ruffles at wrist. Velvet caif edged with pearls, veil floating at back, pearl girdle.

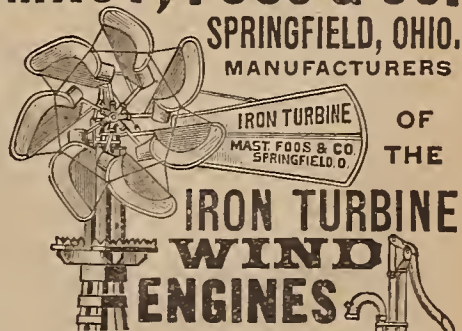
"KATYDID."—You did not enclose the lock of hair, so I cannot tell you the color. You should have no difficulty in seeing the color of your hair for yourself, however. Read recent numbers of the COMPANION for suggestions for wedding dress. A ruching of silk, with pinked edges about the foot, and bodice trimming to match, would be pretty on white cashmere. A bride does not carry a handkerchief different from anyone else. Brides carry only white blossoms. The bridegroom may wear one small bud in the lapel of his coat. See January first issue for a pretty style for a black silk dress. A feather-trimmed toque will be pretty, with or without strings. Wear whatever is most becoming in headwear. Your mother and father should receive with you. Do not "pass refreshments." Have sandwiches (made very small and daintily, with minced, not sliced meats), small fancy



FIG. 2.

cakes and coffee, or coffee and cakes and ice-cream. Have these on a table, the plates in a pile, napkins in a pile, etc.; and let the gentlemen wait upon the ladies, who sit or stand about the room, but not at the table. The coffee should be in a large urn, and some one person should serve it as required. Or you could have cake and lemonade, serving the latter in a mammoth punch-bowl. A servant or someone must be in readiness to remove soiled dishes, replenish the table, and so on. Knives and forks are not needed with sandwiches; they are taken in the fingers.

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FIG. 5.

a skirt (which is first carefully fitted, and hung upon a trial belt of a piece of lining muslin), is to turn down and "pink" the raw edges of the lining skirt, and sew it "overhand" upon the belt, the raw edges of which are turned in. The draperies are then sewed into place just over the edge of the belt, and the raw edges are covered with a piece of lute string

FARMERS

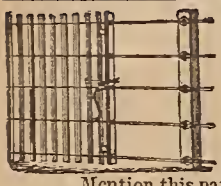
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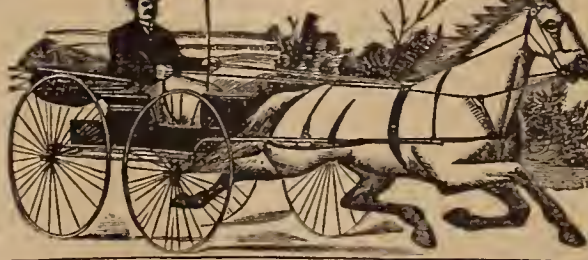
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FARM & FIRESIDE



4 EXTRA PAGES THIS ISSUE.

EASTERN EDITION.

VOL. XIV. NO. 12.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, MARCH 15, 1891.

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The Circulation of FARM AND FIRESIDE this issue is
250,800 COPIES.
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250,683 COPIES EACH ISSUE.
To accommodate advertisers, two editions are printed. The Eastern edition being 100,300 copies, the Western edition being 150,500 copies this issue.
Farm and Fireside has the Largest Subscription List of any Agricultural Journal in the World.

Current Comment.

FARM AND FIRESIDE is frequently enlarged from its regular size of sixteen pages in order to supply the demands of our advertising patrons with more space. This issue contains extra pages. Rather than crowd out reading matter, the paper is enlarged and ample space given for additional reading matter, so that the subscribers get their full share of the extra pages. As a return favor for giving them more than promised, we ask our readers never to fail mentioning this paper when they write to its advertisers. It is a little favor that will be appreciated by both advertisers and publishers. The extra pages of this issue cause a rearrangement of some of the departments. The "Extracts from Correspondence" will be found on page 202.

THE Ohio State University is one of forty-two colleges founded on grants of land-scrip made by the Morrill act of Congress, passed in 1862, for the establishment of

At least one college where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

As supplementary to this act, Senator Morrill last year introduced and had passed an act

To apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an act of Congress, approved July 2, 1862.

The appropriation to each land grant college under this act is \$15,000 for the year ending June, 1890, \$16,000 this year, \$17,000 next year, and so on until the amount reaches \$25,000, which is to be continued indefinitely. The 1890 act contained this provision:

No money shall be paid out under this act to any state or territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students; but the establishment and maintenance of such colleges separately, for white and colored students, shall be held to be a compliance with the provisions of this act.

Then, to meet the special case of Alabama, where colored students are not admitted to the land grant agricultural college, but where there is a separate institution for their education in agriculture and the mechanic arts, the following amendment to the original bill was adopted:

In any state in which there has been one college established in pursuance of the act of July 2, 1862, and also in which an educational

institution of like character has been established, or shall be hereafter established, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the act to which this is an amendment, the legislature of such state may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act, between one college for white students and one institution for colored students, established as aforesaid, which shall be divided into two parts and paid accordingly. And thereupon such institution for colored students shall be entitled to the benefits of this act and subject to its provisions as much as it would have been if it had been included under the act of 1862; and the fulfillment of the foregoing provisions shall be taken as a compliance with the provision in reference to colored students.

Misconstruing this amendment, the Ohio Senate committee on universities and colleges has recommended an equal division of the recent congressional grant between the Ohio State University and Wilberforce University, in compliance with the demand of the latter.

While FARM AND FIRESIDE has not hesitated, in the past, to express the opinion that the Ohio State University was not doing what it ought to do for agriculture, and that it was drifting away from the objects and purposes for which it was founded, it is emphatically opposed to this contemplated division of the endowment fund.

In the first place, it is illegal. The amendment does not apply to this state. In the land grant college of Ohio, colored students have always been admitted on equal terms with the white, and have never been debarred from any of the privileges of the institution. The law provides for the division of the fund only in states where the two colors are educated in separate institutions. In fact, the Secretary of the Interior cannot, under the circumstances, divide the congressional grant to the State of Ohio without violating the law.

In the second place, Wilberforce has no just claim to any part of the grant. It is a denominational school. But for the present we pass over the objection that it is wrong in policy and principle to divide public school funds for the benefit of any sectarian institution, white or colored, whether Methodist or Presbyterian, Protestant or Catholic. Wilberforce is not an institution for agriculture and the mechanic arts. It never has had facilities for teaching agriculture, and does not, as far as we have learned, even promise to give instruction in agriculture in the future, provided it secures a portion of the fund. The only way for it to be justly entitled to any portion of the congressional grant will be for the Ohio State University to reorganize as an institution for whites only, and for Wilberforce University to reorganize as an agricultural and mechanical college for colored students only.

Again, in Ohio there does not exist the slightest necessity for a division of these school funds. Colored students who really desire to take a course in agriculture or the mechanic arts could and would go to the State University rather than to a sectarian institution that has not and does not expect to have adequate facilities for instruction in such branches. A division of the national endowment fund would divert it from the purpose for which it is intended, and fritter it away. The Ohio State University is the only

institution in the state that is legally entitled to the benefits of the Morrill act, and the only one that can apply the national endowment fund for the benefit of agriculture and the mechanic arts.

It sometimes happens that factory employes, or clerks in city stores and people in similar occupations, come to the conclusion that they could make a living much easier by growing vegetables for market than in their legitimate calling. The supposed independence of the soil worker is a great temptation, and success seems so certain and easy from the instructions they have read in horticultural books and papers, that the next thing we receive a letter something like this: "I have twenty-five acres of good, tillable ground, six miles from market. What would be the best thing for me to turn my attention to, to make the most money? I am not a practical farmer or gardener, but am willing to learn." Or perhaps the letter reads: "I am a young man, clerk in a store, without practical experience in gardening, but have read some books on the subject, and horticultural papers, and tried to study up, with the idea of growing vegetables for market. How many acres will it take to afford a man a decent living and a little to lay by for a rainy day? What are the most profitable crops. What is the best location?"

Of course, we cannot give definite replies to such questions, simply because it would be nothing more than shooting in the dark, and because we would be more liable to do mischief than good by any attempt to give a definite answer. Success in market gardening cannot be attained without a great deal of experience and hard work, and proper regard for the surrounding conditions and available markets. What would pay largely in one place might result in loss in another.

Before anyone could engage in market gardening with any prospect of making a fair living by it, he must learn by practical experience how to produce good vegetables in the cheapest way; and when he has learned this, he should study his available market and see what produce his market demands, and then try to grow just that produce, and to dispose of it to the best advantage. Skill, good judgment, perseverance and a great deal of experience, with hard work, are indispensable requisites of the business. The only way to success for a young man leads through an apprenticeship in the employ of a good and successful gardener near a large market. The "smart" young fellow who imagines that his smartness and education will serve him in place of practical experience, invariably comes to grief when he embarks in a business as complicated as that of market gardening.

WE have received numerous inquiries about sugar beet culture. The Department of Agriculture, Washington, D. C., has published bulletins that contain the latest and best information on the subject. As our inquirers can find so much more information in these bulletins than it is possible to give in our limited space, they are advised to obtain them. These inquiries show a growing desire among farmers to diversify their crops, and their attention has been turned to sugar beet culture as it promises, in the right localities, to be a profitable substitute for some of the staple

crops, of which there is now an overproduction. So many inquirers seem to have the idea that they can go into the business on a small scale, and want to know how to go about it. The production of beet sugar is an entirely different thing from maple sugar. It cannot be profitably produced on a small scale. It will be a waste of money to engage in it in that way. Success is promised only where there is co-operation among growers, and a large plant established, with all conditions favorable.

Before investing any money, study the publications referred to. Money can be saved by so doing. Every attempt that ends in a failure is a drawback to the ultimate success of the industry in general. Keep out of the business unless climate, soil, water, transportation facilities and all other conditions are favorable.

It is reported that the Oxnards, who built the beet sugar factory at Grand Island, Nebraska, have established another large one in Los Angeles county, California, where it is claimed that there are over one hundred thousand acres of land admirably adapted to sugar beet culture.

A SUBSCRIBER sends a long communication on the silver question, the first and main point of which reads as follows: "The inevitable and almost immediate effect of unrestricted and free silver coinage by the United States will be to raise the price of silver bullion in New York and Philadelphia to its par value of about \$1.29 an ounce, as compared with and in exchange for the United States silver dollar."

How does he know that free coinage will raise the price of silver bullion to its par value? That is the very point about which there is a difference of opinion between the honest men on both sides. This correspondent is evidently an honest advocate of free silver coinage, because he does not contend for depreciated money. He does not want a bob-tailed seventy-five-cent dollar, as many others do. It is his honest opinion that free coinage will place the silver dollar on a par with the gold dollar. But it is only an opinion. If it were a certainty, congress would have passed a free silver coinage bill months and months ago. If silver were worth \$1.29 an ounce there would be no trouble in getting a free silver coinage law. The strongest opposition to free and unlimited silver coinage comes from thoughtful men in every line of business, who want a sound currency, and believe in honest money, but do not think free coinage would raise silver to par. Wage workers and farmers would be the greatest sufferers from a depreciated currency, and they are wakening up to a sense of the danger they have escaped from. Judging from the trend of public opinion as expressed in the press, there are not nearly as many advocates of free silver coinage now as there were three months ago.

It is not often that an ex-president has the opportunity of vetoing a bill before congress, but Cleveland seems to have enjoyed that distinction. His letter against free and unlimited silver coinage was practically a premature veto on the bill pending before congress. It had the effect of arousing the anti-silver coinage congressmen of his party to active opposition to the measure and was one of the principal causes of its failure.

FARM AND FIRESIDE.

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any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

SUGGESTIONS FROM THE EXPERIMENT
STATIONS.

BY JOSEPH (T. GREINER.)

ASPARAGUS OBSERVATIONS.—
Every gardener is prob-
ably aware that some as-
paragus plants only bear
flowers, but no seed, while
others produce seed. Theformer are the male plants, the latter the
female plants. For a long time it has been a
disputed question whether the male
plants give stronger shoots, and more of
them, than the female, or not. Our friend,
Prof. W. J. Green, of the Ohio Station,
has practically settled this question by
experiments made in 1889 and 1890. As
reported in bulletin for October, 1890, he
has found that male asparagus is about 50
per cent more productive than female
plants, and the shoots being larger, have
a greater market value. The gain from
male plants is especially large in the
earlier part of the season, or just when
the "grass" sells at a larger price. To
make this information of real, practical
value, we need one thing more; namely,
directions how to tell the one kind of
plants from the other in the seed-bed, or
in a lot of purchased plants. We will
wish to set male plants only, and to throw
the less productive female plants away.
If we could do this, we might make our
plantations much more productive and
more profitable. Who can give us a hint?Prof. Green also speaks out once more
in favor of rubber bands for bunching
asparagus. The extra expense, he says, is
more than counterbalanced by the time
saved, while the bunches have a neater
appearance, hold together and bear hand-
ling better in marketing. The method
employed in bunching with rubber bands
is to slip a band over an ordinary teacup—
one with straight sides and without
handles—fill the cup with asparagus
shoots, heads downward, and then slip
the band from the cup over the bunch.
This makes a bunch of about the right
size, and gives the upper end a nicely
rounded appearance. All that remains to
be done is to slip on another band, and to
square the butts with a sharp knife. The
size of rubber band best adapted to the
purpose runs about two thousand bands
per pound, and a pound can be bought
for about two dollars.**TRANSPLANTING ONIONS.**—The same
bulletin contains an interesting article on
the advantages of transplanting onions
over the old method of growing them
from seed sown in open ground. "Trans-
planting onions," says Prof. Green, "in-
creased the yield one hundred per cent in
some cases, and gave a decided gain with
all varieties. The varieties that gave the
best results were Pompeii, Prizetaker andWhite Victoria. Those showing the small-
est gain were Danvers, Wethersfield and
Michigan. The transplanted onions were
larger and more uniform in size than
those grown from seed sown in the open
ground. The extra labor involved in
transplanting was offset by the saving of
labor in weeding. The increase in crop,
without a corresponding increase in labor,
lessened the cost per bushel in production."**PEACH GROWING.**—The December bul-
letin of the Tennessee Station, at Knox-
ville, tells of the various fruit trees under
test at the station grounds. In regard to
peaches, I see that the Tennessee people
have the same difficulty to contend with
that growers in many other sections—for
instance, here in western New York—have
to face; namely, the destruction of the
fruit buds or blossoms by late frosts. This
might be avoided to a certain extent, says
the bulletin, by planting on northern
exposures. I think it does not admit of a
particle of doubt that peach growing
would be one of the most profitable
branches of horticulture if we could only
secure the crops. At the last meeting of
the Ontario Fruit Growers' Association, at
Hamilton, Ontario, Mr. S. D. Willard, the
skilful Geneva (N. Y.) fruit grower, ad-
vised to plant none but hardy sorts; that
is, sorts hardy in fruit bud, and named
among them the following: Hill's Chili,
Morris' White, Red Cheek, Mellacatune,
Early Rivers, Horton's River (a freestone),
Hyne's Surprise (also a freestone), Yellow
St. John, and perhaps Garfield or Brigdon.
There are plenty of localities—as, for in-
stance, many sections bordering on lakes
and other large bodies of water—where
peaches are a certain crop, even with less
hardy varieties. Such chances should not
be left unimproved. The country willlever, C. The two small posts at each end
of the trough serve as guides to the cover,
and are connected at the top with an iron
bolt. After the slop is poured in, the
cover is raised and held up by pulling
down the lever and putting it under the
hook, D. The arrangement is an ex-
cellent one. One old sow cannot get up
in the trough and "act the hog" while the
slop is being poured in.

BEE ITEMS.

There is nothing about a farm that will
better reward the intelligent farmer than
a few colonies of bees, well kept. Man-
agement is what you want now.

THE HIVE.

The hive should be a frame one of some
standard make; or, in other words, the
size of frame of a standard make, as the
Langstroth frame, which is in universal
use, and seems to be just the thing. The
Simplicity hive is perhaps the best in use,
as it takes in the Langstroth frame, giving
smooth inside walls, and can be used as
one story or ten stories, if wanted.

THE BEES.

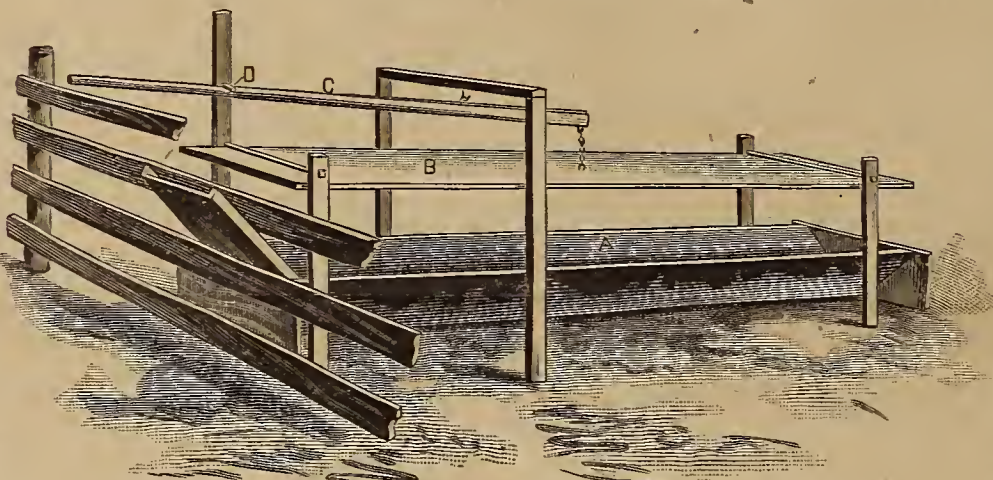
If your bees are in a frame hive you are
on the road to success. If not in frame
hives, I would advise you to change them
the first warm day when the fruit trees
are in bloom. Smoke the old hive
thoroughly, then turn it bottom up and
have another box that will fit the old hive.
Fasten with cleats on each side to keep it
steady, and with a couple of sticks drum
on each side of the hive for ten or fifteen
minutes, at intervals, and you will now
have nearly all of your bees from the old
hive in the box. Knock off the cleats and
set your box of bees to one side. Care-
fully take off one side of the old hive anda muslin cloth over the mouth and invert
it over the cluster where the bees are
strong in numbers. Take any nice box,
ten inches square, or less, and tack on for
a bottom a piece of heavy cotton—bed-
ticking is better. The top can be open if
preferred, putting in a few pieces of
broken comb to keep the bees from drown-
ing. Stick a few holes in the ticking with
a table-fork. Put the tacks in about one
inch apart, and draw the ticking tight
over the edge of the box. Set the box
over the bees and pour in the sirup. If
the weather is warm enough the box will
soon be full of bees.

HONEY BOARDS.

In all double-story, frame hives there is
a board with holes or slots in it to separate
the top frames from the lower, to prevent,
also, the bees from joining the combs.
This board is a nuisance. Some bee-keep-
ers use a piece of oilcloth, which is
tolerably good, but is offensive to the bees.
The best one is made of a piece of cotton
drilling the size of the hive from outside
to outside. Take a lump of beeswax,
break it up into small pieces, spread it
around over the cloth, and with a hot
smoothing iron melt the wax and iron it
into the cloth until it is well covered. Cut
one or more slots in the cloth and iron
down the edges like a hem, and you have
something that is perfection as a honey
cloth, that will last for years, and that the
bees will not cut. OLD BEE-KEEPER.

Maysville, Ky.

FRUIT HYBRIDS.

I beg Prof. Lazenby's pardon. I cannot
accept his assertion that I made any
"sweeping assertions" in my late articles
on hybrids among fruits. I felt all the
time I was writing them that I was not
sweeping deep enough and clean enough.
I wrote by the book, for within twenty
miles of where I write this, tens of
thousands of hybrids between distinct
species of the same families, and between
species of widely separate families and
orders, may be seen growing any day in
the year, and it has been proven con-
stantly by Luther Burbank, of this county,
that what I wrote was exactly true;
namely, that the limit of successful hybrid-
ity between plants of different species,
groups, genera and orders, cannot be
known until it is tried and tested rightly.
Rightly is the point; hundreds might try
and fail where the waster hand would
succeed without trouble; and Mr. Bur-
bank's successful manipulations, show us
that he who carries the right key and has
the skill to throw back the bolts, can open
up the door and allow man to gain nearly
any point desired from vegetable life.The Professor himself did make, in his late
article on "The Production of Hybrids," a
sweeping assertion that the facts do not
seem to warrant, when he says: "As a
rule, it is only varieties of the same
species that interbreed freely." The proof
seems to be that this is far from being
correct. We have many distinct species
in nature that pollinate each other freely,
but cannot possibly pollinate themselves.
Or in other words, nature has some species
so arranged that it is not possible for the
pollen of a species ever to reach its own
stigmas, and they are absolutely infertile
with their own pollen if placed on the
stigma artificially; in fact, the flower's
own pollen is poisonous to its own stigma,
nor will the pollen from flowers of any
other variety of the same species pollinate
its stigmas; it must have pollen from the
species of another genus, and in some
cases from a widely different order. So
we see it is not true that crossing represses
variation. If there is even one general
rule, or any rule in botany or vegetable
physiology that there are not marked ex-
ceptions to, I have failed to know of such.
So broad assertions, if we have facts to
back them, should not invite criticism.
Yet Prof. Lazenby does invite criticism on
both the following statements; namely,
"The most characteristic feature of hy-
brids *** is a very low degree of repro-
ductive power." And again: "In the
animal kingdom, nearly all the the well
known examples of hybridity are sterile,"
neither of which are true, especially, nor
in the abstract; some are, others not; the
great majority of hybrid plants are not,
the few are; and even they possibly not,
when they are in reach of a right consort.
A few hybrids in plants have faulty gen-
erative organs; so, also, a few have that
are bred naturally in nature's woods,

HOG-TROUGH.

need the fruit, and the growers will find
money in growing it.**LIME FOR POTATO ROT.**—The old pre-
scription for putting a stop to rot in
potatoes put in storage, was to sprinkle
them with air-slacked lime. The Mass-
achusetts Experiment Station (Amherst)
has investigated this matter, and reports,
in bulletin for January, 1891, that in
samples treated with and without lime
(some stored in an ordinary cellar, others
in a granary), the differences in the amount
of rot are very small. In the case of the
cellar samples, the tubers untreated kept
even slightly better than those which
were limed; but in the granary samples
the reverse was the case. Altogether, the
station people do not feel justified in pro-
nouncing either for or against the treat-
ment. Thus, one after another, the old
notions are upset.**TEST OF HAY CAPS.**—The Massachusetts
station also tested three kinds of hay caps
—plain cotton caps, oiled cotton caps and
Symmes' patent caps. Cocks covered with
these caps were out during a thunder
shower. The conclusions drawn by the
station are as follows: The condition of
the hay under the plain cotton cap (heavy
material) was decidedly the best, but it
was recognized that with a heavier rain
this might not be the case. The Symmes
caps are easily put on, but they are clumsy
and heavy, and to carry a quantity to a
field and distribute them, requires far
more labor than for the cotton caps.
Neither were they found to be durable,
nor sure to remain in place during stormy
winds. From the single test, the plain,
heavy cotton cap appears to be the best.

HOG-TROUGH.

Mr. J. Wiley, Indiana, sends a descrip-
tion of a convenient hog-trough, which is
fully explained by the accompanying cut.A is a V-shaped trough, and B is a board
cover arranged to raise and lower by thecut out the combs. Take a frame from
your new hive and lay it on a smooth
board, laying the comb underneath; cut
around on the inside of frame with a
sharp knife, to make the comb fit the
frame. If the comb is not long enough for
the frame, put in pieces of worker-comb.
as you don't want much drone-comb.
When the frame is full of comb (if in
pieces), take fine, thread-wire and wrap it
around the frame on the outside to hold
the comb in place; this is best done when
the comb is lying flat. I have tried every
known device for fastening combs in
frames, and I find thread-wire perfection
for that purpose.Now, place your full frame in the new
hive and follow with the others. When
the frames, full of combs, are all in the
new hive, straight and nice, one and three
eighths inches apart from center to center,
and the bottom board in place and the lid
on the hive, take your box of bees and
empty them in front of the hive; they
will all enter in a few minutes, and the
work is done. Combs full of honey,
especially if they are thick combs, I would
leave out. They can be uncapped and fed
in the top of the hive to the bees, unless
the combs have brood in them; in that
case I would put them in the hive with
the frames. Transferring should not take
over forty or fifty minutes, and I am sure
you will be pleased with the change. The
wire can be removed from the combs any
time during the summer, but it is not
necessary that it should ever be removed,
as it does not interfere with the work of
the bees.

FEEDING BEES.

If colonies are light in stores, they
should be fed, now, with sugar sirup—
three pints of sugar and one and one
half pints of water. Let it come to a boil
and cool before using. For spring feeding
I prefer it quite thin. To make a good
feeder, fill a glass tumbler with sirup, tie

Some of the most enormously productive, healthy and vigorous fruit plants I ever saw were hybrids between species of *Rubus* belonging to widely separate groups, thousands of them fruiting *en masse*.

Hybrids between animals are not, so far as known, sterile *per se*. I gave the plain and simple reason why they are classed as sterile; namely, the great mass of them that are, do not breed because they have no generative desire for each other, or for either parent species as a rule. Therefore, "sweeping assertions" in hybridity and crossing are both safe and unsafe, and we should not smother up so useful a thing that we all know so little about, in criticisms. The endeavor should be to make the science of crossing as simple as possible, so that the practical man will become interested in it, and experiment.

Volumes might be written on the special points of the science of hybridity. We, as yet, know little or nothing about it. Let us see how lame we are. Among other things it has often been asserted that a hybrid between the apple and pear—closely related species of the same family—cannot be obtained. What proof have we? It has often been tried without success. How do we know there was not success? For the proof is good that in some plants the female side is so strongly prepotent that the male element has no effect whatever on the resulting progeny. That is, we might pollinate a pear blossom with apple, quince, crab, mountain ash pollen, or from any other species of the subgenus *pyrus*, and the resulting seeds will all produce normal pear trees. Yet, there may be pollen that would break the pear all up, and it would be safe to look for it in the pear species of East Asia. Then, when once broke, the pollen of the other species of the family might get in their work on the progeny. So we see that it is not safe either to generalize dogmatically when we are trying to write of hybridity.

I am greatly pleased to learn that our experiment stations are making experiments in this important branch. The experiment detailed in Prof Lazenby's paper does me a world of good, for, when I wrote five years ago, only *five*, that I knew the cherry would pollinate the plum to a limited extent naturally in the open air, I was laughed at all over the country as a crank, or possibly worse. Who is doing the laughing now? Let the students at our experiment stations have full swing, and do not tell them they cannot do this and that, for no one, as yet, knows what can be done in hybridity. D. B. WIER.

Sonoma county, Cal.

THE "PAINTED" WOOD-PILE.

The wood-pile is a farm factor of great importance, and whoever neglects it quarrels with his dinner, and may be compelled to contend with hunger.

Near cities farmers may burn coal, but generally the fuel is wood, in spite of the cry of the alarmists who declare that the forests are receding and soon will disappear. The wood-pile may serve as a sign, and make known the methods of the farmer. If the pile be big in spring, then it is known that the owner does not intend to be disturbed in the busy season about ten o'clock in the morning, by the cry from the house, "If you want any dinner, you must cut some wood."

If there be only a chopping-block and a few uncut sticks lying around, then it is evident that the housekeeper, in addition to other cares, must worry about the fuel supply. A wood-pile may be picturesque—a thing of beauty and a joy, not forever, but while it lasts.

In a farm-house yard, in the angle made by the ell and the main part, is an extraordinary wood-pile, which about this time of the year begins to receive attention. If you are riding by, you may stop to admire and to exclaim, "Well, I never saw a painted wood-pile before."

When the pile has reached the proper size, the outside sticks are laid the same way, as near perpendicular as possible. Then on these, laid in the same way, is another course of sticks. The painted appearance comes from this arrangement: The first course of sticks is composed of dark-skinned woods with the bark to the weather, and the next row may be inside sticks, or wood without bark. A row of white birches makes another course, and dark apple trees another.

Thus, the different bands of color alternate till the top be reached. The result is a loaf-shaped pile, which, at a distance, appears like an inverted bowl of painted china. On the house side is the opening from which the daily supply is obtained, but the part to the roadside remains intact the greater part of the winter. The wood ought to be indoors, but if that be impossible, it should be arranged as described. If no attention be given to "painting" it, the outside sticks, if not all of them, should be laid perpendicularly. In this way the rain is quickly shed, and the inside remains dry.

Wood cutting may be regarded as most uninteresting farm work, without a cheerful feature in it anywhere; but, like everything tedious and monotonous, a little ingenuity will help to brighten. "Painting the wood-pile," has interested many boys, for the pile referred to has been copied.

GEORGE APPLETON.

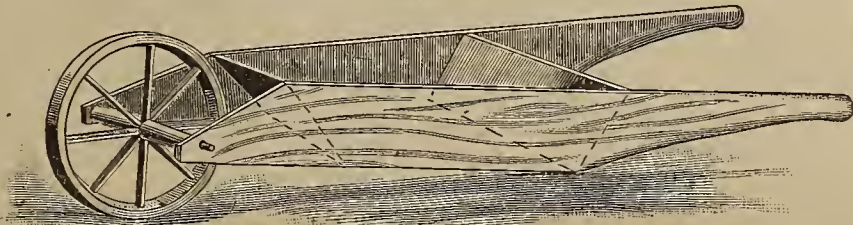
MARTINS.

Every farmer who desires to make his home attractive and pleasant for himself and family, should not fail to provide a home for the martins. They are always cheerful, happy and gay, and their merry prattle is welcomed by everyone. Besides this, they are said to be good to keep away chicken hawks. Make your boxes now, while you have some idle time. If you will take the trouble to dress the lumber and paint the box, you will be amply repaid for your work, for every day through the spring and summer they will remind you of what you have done for them.

W. J.

A CHEAP WHEELBARROW.

Mr. P. Brugger, South Dakota, sends us a description of a cheap wheelbarrow that



A CHEAP WHEELBARROW.

can be made by any farmer handy with common carpenter tools. The accompanying cut needs no explanation. The sideboards are made from planks six feet long and sixteen inches wide. The bottom and end pieces are also made out of wide, pine boards. No legs are needed.

CULTURE OF BARLEY.

The best soil to grow wheat is also the best for barley. This is a rich clay loam, both plants requiring compactness and fineness of mould. Light soil, whether of a peaty or sandy character, will not do; neither will sod, nor any ground charged highly with vegetable material. On the homestead, barley was largely grown and tried on all kinds of soil. Sometimes it would succeed on sod, producing a very heavy growth, but usually the berry was lighter and the straw weaker and more disposed to lodge than on the same soil if stubble or fallow, especially in a moist season. Besides, my experience is that it matures unevenly on sod—ripe grain and grain in the milk occurring at the same time.

Like wheat, barley is a hardy plant, doing best in a cool climate. It is therefore adapted to early sowing, and this it requires so as to mature before the heat of advanced summer sets in, which, in connection with drouth, is always a serious hurt to this grain. I have known in severe cases a total loss of the crop. All this is avoided by sowing early in the spring. It can hardly be put out too early in this latitude, if the ground is mellow and dry enough. This will fit it to be cut by about the beginning of July—the straw bright and strong and the berry plump.

Barley, although a hardy plant like wheat, is also exacting, requiring not only a fine, compact mould, clean and well enriched, but thorough drainage. A hoed crop, if kept clean, is a good preparation, in general needing only cultivating and harrowing in the spring (no plowing) before sowing. Sow a bushel and a peck broadcast per acre and cover with a smoothing harrow—or a bushel if drilled in, if the ground is rich, as it should be.

Few if any grains require such careful treatment of the soil as barley, but the benefit in the crop will be proportionate and the land will be left in good condition for a succeeding crop, which with us has usually been oats. It is also in excellent condition to seed down when the barley is sown, this being a favorable crop for that purpose.

As to harvesting, there are various ways. The point to have in view is to secure as bright and plump a berry as possible avoiding, therefore, overripeness and immaturity, and cutting when the berry is ripe and somewhat hard. As soon as wilted and dry outside, put in small cock covering with the hay-cap and keep till cured, when both straw and berry will show a clean, light-yellow color.—Count Gentleman.

BROOM CORN.

A rich soil will produce a flourishing growth, and if clayey, covered with old or new turned sod, should be well rolled after deep plowing and harrowing have been performed. While broom corn has been successfully raised on newly-broken prairie, the growth is likely to be weak, coarse and to run to unprofitable stalks; the perfect pulverization of the soil should be, therefore, the first object at which to aim, and a rolling surface should be chosen rather than a flat one, on which water might collect and stagnate during the wet seasons, thereby giving a sickly, unhealthy appearance to the brush, destroying its vitality and rendering it scant, brittle and unsalable.

Of the various varieties the Chinese, California and Missouri evergreen are most in demand. In deciding this most important point, however, the nature of the soil and local experience of other

as kindly done her share, the result will be a handsome growth, which, properly harvested and cured, will be worth the highest market price. It should be cut while still green, and when, at slight pressure, milk exudes from the seed; if left later the tips turn red or brown, and should the ripe, standing corn receive a shower, may even become black. Color will largely determine the value of the brush, and the judgment shown at this critical period will decide whether our brush ranks as No. 1 hurl or carpet, or as low grade or inferior, at a discount of fifty per cent. Having paid careful attention to this feature, the scraping and curing must now be looked to.

The stalks should be left four to six inches long, which will make it more desirable, and the brush selected by hand-fuls and divided into long or short, crooked, fine, medium or coarse, straight brush. This facilitates scraping and also baling the various grades separately. The scraper may be, according to the acreage, horse power or home-made. In the latter case a barrel or smooth section of a log may serve as a cylinder, studded with points not too blunt or angular, as otherwise, or from holding brush too long against the cylinder, the corn may be torn or ragged. It will be mistaken economy to leave the seed on the brush to add to the weight, as the depreciation from waste would be great; and after seed has been selected for the next season or for sale, the balance may be profitably used for feed or manure. After scraping, it should be immediately taken to the sheds.

The sheds must be open at the sides and ends for free circulation of air, and, if provided with canvas or folding doors, as a protection against rough weather, will be more complete. The brush should not be allowed to lie in the field after cutting, which would turn it yellow or whiten it, but immediately after scraping should be placed on slats in the sheds, each layer a few inches thick, with seven to eight inches between them, and when thoroughly dry, which will remove any danger of must or sweating in the bale, is ready for baling. This should be well and solidly performed in a broom or hay press that will turn out a bale of two hundred and fifty or three hundred pounds. Armfuls should be laid alternately each way, and when the brush is short, a little occasionally in the middle to hold it together.

Each grade should be baled separately, and, after compression, strongly secured with No. 9 fence wires, as care at this stage will lower freight and storage charges, since a railroad car will hold two tons more of well-baled corn, and it will arrive at its destination secure and attractive in appearance.

To summarize: Nature of soil, plowing and preparing it, planting poor seed at improper distances apart or at unequal depth, partial cultivation, stalks too long, harvesting too late, leaving seed on or scraping too close, allowing it to lie in the field, improper or partial curing, baling "hot" or insecurely are the chapter of accidents which will, if overlooked, prove fatal to the successful culture of broom corn.—Exchange.

Now is the Time

To purify your blood and fortify your system against the debilitating effects of spring weather. At no other season is the bitter taste in the mouth more prominent, the breath so offensive, the drowsy dizziness so frequent, or that extreme tired feeling so prevalent. Hood's Sarsaparilla is just the medicine to build up the system, purify the blood, cure biliousness and headache, overcome that tired feeling and create a good appetite.

Hood's Sarsaparilla

"For a first-class spring medicine my wife and I think very highly of Hood's Sarsaparilla. We both took it last spring. It did us a great deal of good and we felt better through the hot weather than ever before. It cured my wife of sick headache, from which she has suffered a great deal, and relieved me of a dizzy, tired feeling. I think everyone ought to take something to purify the blood before the hot weather comes on, and we shall take Hood's Sarsaparilla this spring." J. H. PEARCE, Supt. Granite Ry. Co., Concord, N. H.

Hood's Sarsaparilla is the best blood purifier before the public. It eradicates scrofula and all humors, cures salt rheum, boils, pimples, etc. The severest cases of blood poisoning have yielded to its superior curative power.

"This is to certify that I have used Hood's Sarsaparilla in my family for some time past and have found it to be a good blood purifier." ROBERT A. SMITH, Justice of the Peace, Honesdale, Pa.

The Spring Medicine

"I wish to enroll my name as one of those who have derived health from the use of Hood's Sarsaparilla. For many years I have taken it, especially in the early spring, when I am troubled with dizziness, dullness, unpleasant taste in my mouth in the morning. It removes this bad taste, relieves my headache and makes me feel greatly refreshed. The two bottles I have used this spring have been worth a dollar a dose. I advise all my friends to take it." JOHN BINNS, 663 43d Street, town of Lake, Chicago, Illinois.

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100 Doses One Dollar

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100 Doses One Dollar

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.



THE USE OF HOT-BEDS.

The season is an unusually favorable one for the hot-bed maker. The temperature ranges from a few degrees below freezing to a few degrees above it. The least bottom heat in a hot-bed gives all the warmth needed for the strong growth of hardy plants and security against injury by cold. At the same time we can get all the soil we may need for the beds right from the open ground, if we have not provided a supply of such soil in the fall and stored where safe from freezing. In short, this is just the season when people can raise their own cabbage, cauliflower, lettuce and similar plants, and a home supply of nice radishes, spinach, lettuce, etc., under glass without much trouble.

It will not be necessary, this year, to pack down two feet or over of fermenting horse manure into the bottom of the hot-beds for the more hardy things. A foot or eighteen inches will be fully sufficient, especially if the material consists largely of clear horse droppings and but little litter. If available, I would add some dry forest leaves, say about one third (in bulk) as much as the manure. This tempers the mixture, and gives a more moderate and lasting heat. I always make provision for this supply of leaves in late autumn, when I have the dry leaves carefully raked together in piles and then taken to the poultry-house, or stored in some out-building.

A mistake made by almost every beginner, is to get the soil too far below the glass. Always make allowance for the settling of the manure, especially in the center of the bed; here it should be well rounding, or else packed down more solid than at the sides. A rounding (convex) bed would be preferable to a concave one (sunk in the middle), but it will take more material in center than you imagine, if you wish to prevent its sagging or caving in. Fermentation makes fresh manure settle down very rapidly. For this reason the heating material should be well packed down and the bed filled up to within a few inches of the top of frame, so that there is just room enough for the soil on top. When this is put on, to the depth of, say, four or five inches, the whole will have settled enough to allow two or three inches of space between the glass and the surface of the soil. This, at first, is enough for most purposes. The settling gradually continues, and will give room enough for the plants to grow when such room is needed. Thus you get all the benefit from sun and light, and your plants will grow short and stocky, instead of giving you the spindling things usually found in amateur hot-beds, where the surface of the bed is eight or ten inches below the glass.

In a bed properly constructed, it is the easiest thing in the world to grow a good supply of fresh, crisp radishes for the table. Often the space between each two rows of other plants—lettuce, spinach, cabbage or celery plants, carrots, beets, etc.—may thus profitably be utilized for a row of radishes, which will be off in three or four weeks, when their room is needed for the others. Any of the "earliest forcing" radishes—Round Scarlets, Early Erfurts, White-tipped Scarlets or Olive, Carmine Forcing, etc.—are good for this purpose, and practically there is not such a very great difference between any two of them.

Highly interesting in this connection is what Prof. W. J. Green (Ohio Experiment Station) wrote me a few weeks ago: "We are transplanting radishes. This may not be new, but we never heard of it before. With the turnip-rooted sorts it is a paying operation. It saves a week or ten days time in the occupancy of the bed or frame, and insures uniformity in size and time of maturity. Often we can clear the bed at one pulling, and in eighteen to twenty days from time of transplanting. The roots vary so little in size that they sell more readily, and at a better price. We think, for the same reason, that it pays to

transplant lettuce thrice, instead of once. Of course, I refer to greenhouse work altogether."

This is a very interesting item—as interesting as anything that comes from Mr. Green's pen, which is very prolific in the production of real good things—and of especial value to the market grower.

RAISING EARLY CABBAGE PLANTS.—This mild season I think we can raise good, early cabbage plants, even in cold-frames. Seed should be sown at once. I have tried many kinds for earliest use, but think there is nothing better yet than Early Jersey Wakefield. Have the frame in a well-protected situation, with soil up to three or four inches from the glass, as you will not have to make allowance for settling, and sow seed thinly in rows about four inches apart, leaving not more than one plant to the inch of row. The chief point of importance is the proper hardening of the plants, by exposure, before they are set in open ground. Cauliflowers may be handled the same way.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Russian Almond—Best Peach.—J. H., Tapp, Ind. (1) The Russian Almond is as yet but little known, but is undoubtedly hardy in central Indiana. (2) Probably the Crawford Early is as sure a peach as any grown in your state, though undoubtedly many growers would choose some other variety for first place.

Best Strawberry and Fertilize Pistillate Varieties.—G. F. G., Nevada, Mo., wishes to know what is the best fertilizer for the different pistillate strawberries. What is the best fertilizer for the Bubach?

REPLY:—Probably Tucker State or Capt. Jack are the best kinds to use to fertilize the Bubach in your locality.

Root Grafts.—J. K., Freeport, Neb., writes: "Will slips from apple trees, stuck in the ground, make as good fruit as grafted trees? Are they of any value at all?"

REPLY:—For a severe climate, rooted cuttings of apples would be very desirable, but they are difficult to root and the next best plan has been found to graft on a piece root with long scion, which latter soon sends out roots of its own. They will make good trees in any climate, if they can be grown.

Moving Trees.—C. G. S., Granville, Ill., writes: "Two years ago last fall we set out some crab trees on clay soil. All lived but one, and are doing well. We want to move them to our place in town where the soil is black and rich. Would it be advisable to move them? When would be the best time to transplant them?"

REPLY:—They ought to move without any loss whatever, if the work is carefully done early in the spring, after the land is settled and can be easily worked.

Pruning Peach and Pear Trees.—W. H., Portland, Ind. Peaches should have the new growth trimmed back from one half to one third, according to the growth made. Such pruning removes a part of the surplus fruit buds and keeps the trees in a compact form. Pears should be trimmed only enough to keep them in good form. It will often be required that some of the shoots that run up in the center of the trees shall be cut off. In doing so, care should be taken to note how the buds point, and to trim accordingly.

Root Grafting—Grafting Wax.—S. B. H., Blanchard, Iowa. In root grafting apples, the best kind of union is what is called the whelp graft. Almost any other form of union, if the inner bark of stock and scion come together, will answer the purpose, for the apple unites readily. Simply beveling, without making a split in stock and scion, is not so good as when a split is made; but if so made, and carefully wrapped, they will unite all right.—A good grafting wax is made by warming together three parts rosin, three parts beeswax and two parts tallow. If too hard, add more tallow; if too soft, add rosin.

Gooseberry Fruit Worm.—S. L., Phenix, R. I. The insect you refer to is probably the gooseberry fruit worm—*Pempelia grossularia*. About the time the currants are well formed they begin to turn red or whitish prematurely, and later on the whole bunch will appear as if tied together by a web, but each currant will be hollow and shriveled up. The worm works in the berry and goes from one berry to another, lining each berry with silk. Remedy:—Care should be taken to gather and destroy the worms while yet in the fruit. If chickens are allowed to run among the bushes after the fruit is gone, they will destroy many of the chrysalids.

Walnut Grove.—R. M. H., Hamlin, Ky., writes: "Please tell me how a young walnut grove should be treated. The trees are three to four and six years old, but do not seem to grow. How soon ought they to be marketable?"

REPLY:—A young walnut grove grown for hoop-poles, for which I take it you mean to grow yours, ought to be ready to market in from five to seven years after cutting. It frequently happens that a grove will not get started for several years after planting. If the trees are not pretty close, they branch too much, and the growth is wasted. It might

pay to trim any that spread too much. Then, if the trees are on poor land, the growth cannot help being slow, and there is no remedy but manuring, and that would not pay. Be sure and keep cattle out of the grove.

Grafting Apples.—J. D. F., Ozone, Ark., writes: "I have several hundred apple trees, from three to five years old, of varieties that do not suit me, that I wish to top-graft if they will make good trees. Will most any common sort be good to top-graft? For instance, Early Harvest, Rambo, Red June, Transcendent Crab or Benoni? If so, I could save time by top-grafting instead of raising trees or digging up and resetting."

REPLY:—Most of the common sorts graft readily and form good unions, with the exception of the crab and our ordinary class of apples. The crabs do best when grafted on crab. The Early Harvest, Benoni and Red June will all graft together readily.

Arbor Vitæ Hedge.—D. C. C., Marion, Kans., writes: "I have a row of arbor vitæ planted four feet apart, and they are twelve feet high and about fourteen years old. Can I trim them down so as to make a hedge about three and one half feet high, without killing them? If so, please tell me the time to trim them down."

REPLY:—It will not kill your arbor vitæ to cut them down to three and one half feet if they are well furnished below, but they will never make a pretty hedge, as they will spread out too much. Should you cut them down about one half they would do better than if cut lower. The best time to prune them is early in spring, before growth starts.

Apples, Strawberry, Plums and Pears.—H. R. B., White Blr., writes: "1. What is the largest apple in cultivation? 2. Which is the best strawberry to bear with common culture? 3. Is Simon plum a sure cropper? 4. Is Ogou plum a sure cropper, and what do you think of these two plums for extensive planting? 5. Which is the best standard pear to grow strong, bear young and produce large fruit? 6. Please tell me why the bark of my young pear trees and grafts turn black in spots, rots and dies."

REPLY:—As you have not given the state in which you live, I cannot answer very definitely. 1. Perhaps the twenty-ounce apple. But an apple of immense size is not as desirable as a medium-sized apple. 2. Probably the Crescent, fertilized with Sucker State or some other good, perfect-flowering kind. Such would probably be the surest at the North. 3. It does well in some localities. 4. The Ogou is one of the Japanese plums, and is not hardy north of southern New Jersey. I think there are other varieties that are much surer croppers than the two plums you mention. 5. Probably the Keffler would fulfill such requirements at the North, and the Le Conte at the South. 6. This is due to blight, which is more liable to attack some varieties than others, and is more prevalent in some seasons than in others. We as yet know of no certain remedy for it.

Home Nurseries.—R. P. C., —, Ohio, writes: "There are some nursery agents here selling full root trees at twenty cents per tree. We can buy from home nurseries for ten cents per tree, graft piece root trees. Which is the better to set out an orchard?"

REPLY:—It is much better for you to buy trees from your home nursery, if the proprietors are honorable and they have good trees, than to send away for them. In selecting apple trees it does not matter so much whether they are grown from whole roots or piece roots as whether they are healthy or vigorous. For extreme northern states the piece roots are preferred, since the scion soon sends out roots of its own, and such roots are harder than the roots of most seedlings. These points have been shown conclusively by many experiments.

INSECTS ON FRUIT TREES

Can be destroyed by spraying with London Purple. Diseases of grape vines can be checked by spraying with Bordeaux mixture. The Field Force Pump Co., of Lockport, N. Y., manufacture the Knapsack Sprayer and a full line of Orchard and Vineyard Outfits. Write them for circulars and directions.

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Conducted by P. H. Jacobs, Hammon, New Jersey.

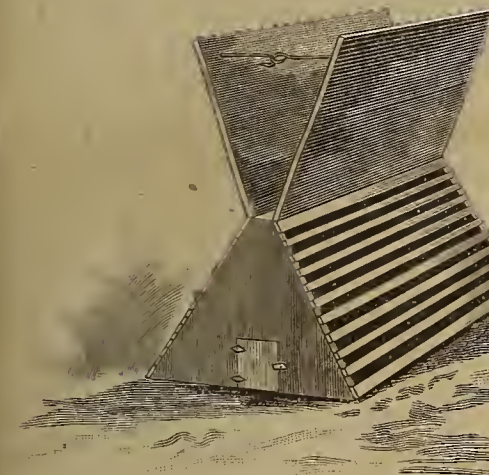
WHEN IS A HEN TOO FAT?

A HEN is too fat when she is apparently very heavy behind, when she is lazy and cares nothing for work, seeking only to have the owner feed her. She cannot easily fly, soon becomes tired from exertion when chased, does not lay, though in good health, and is very heavy when held in the hands. We do not state that any one of the above causes indicates a fat hen, but to observe her in all of them. Of course, the surest method is to lift her and the weight will be there. Examination of the rear of the body will also show the fat under the skin by its color.

As to what should be the character and quantity of the food required to keep them in a healthy condition, cannot be correctly stated, as no two hens are alike. Leghorns and Brahmas (or other large breeds) should not be kept together. If hens are in good condition, the best food is chopped clover hay (chopped half an inch in length and scalded), all they will eat in the morning, a tablespoonful of ground meat mixed with mashed potatoes; and scatter wheat for them to pick up before going to roost.

AN IMPROVED COOP.

A cheap and handy coop for a hen and her brood is sent us by Mr. J. L. Helpman, of Pennsylvania. It is made of any suitable material, plastering lath being preferred. As seen in the illustration, the roof is composed of two doors, hung by hinges, and fastened together, when raised up, by a hook at the top. The doors may



AN IMPROVED COOP.

be raised up in fair weather and let down at night or when the weather is damp. It has no floor, and is easily removed from one location to another. The cost of such a coop is very small, a few laths and a soap-box being easily converted into such a contrivance. It may be of any size preferred.

HANDLING SICK FOWLS.

No one wishes the disagreeable duty of handling sick fowls. A sick fowl seldom cares to eat, but it will drink. Then why not give the medicine in the drinking water. Here are a few remedies. For the cholera give a teaspoonful of liquid carbolic acid in each quart of drinking water. For indigestion use five drops of the tincture of nuxvomica. For roup use a tablespoonful of chlorate of potash. For general debility use the nuxvomica one day and twenty drops of tincture of iron the next. For little chicks that are weak in the legs use a tablespoonful of phosphate of soda. Give all these remedies in one quart of water. They may not be "sure cures," but the method is the easiest, cheapest and best.

STATE OF OHIO, CITY OF TOLEDO, } ss.
LUCAS COUNTY,
FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE. FRANK J. CHENEY.
Sworn to before me and subscribed in my presence, this 6th day of December, A. D., 1890.
A. W. GLEASON,
Notary Public.
Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.
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MAKING HENS LAY.

With those who are engaged in the poultry industry for egg production, which is largely the case with those farmers who encourage the industry, the question frequently arises: "How shall we make our hens lay?" We do not enter upon the subject in the hope of giving any satisfactory answer, or that could be relied upon as absolutely sure, for the reason that we believe that, like many other directions of farm industry, there are conditions affecting results, and what would be good and work satisfactorily under one set of conditions would, under another set, prove an entire failure.

We have just been looking over an article in the December bulletin of the Cornell Agricultural Station, on the effect of nitrogenous or carbonaceous rations on fowls, that seems to have some bearing upon the question of egg production. Two separate lots of hens were fed; one with one third part wheat bran, one third part wheat shorts, one third part linseed meal and two parts skimmed milk, for a nitrogenous ration; the other with cracked maize and maize dough, as a carbonaceous ration, both being fed a small amount of green clover, as long as it lasted, and afterward with cabbage. During the experiment one half the linseed meal was substituted by cotton-seed meal, and evidently with advantage. At the end of the experiment, which was continued for 125 days, little difference could be seen in the two groups. It is proper to state here, that in an experiment of the same character with chickens, those fed on the nitrogenous food were large, plump, healthy, active and well feathered, while those fed on the carbonaceous were much smaller, sickly, and in some cases almost destitute of feathers. This fact is worthy of remembrance by chicken raisers.

When it came to the consideration of the subject of egg production, the hens fed with the nitrogenous ration produced 79 eggs as against 26 produced by those fed upon the carbonaceous food. But counting the weight of eggs, those fed on the nitrogenous food gained 6.03 pounds, while those fed the carbonaceous ration gained only 1.36 pounds. There were, however, difficulties attending the increased egg production; the eggs were smaller, had a disagreeable flavor and smell, watery albumens and small, dark-colored yelk, while those of the hens fed on carbonaceous food were large, of fine flavor, natural smell, with rich, large yelks; yet, in testing the quality of the

flesh, by cooking, the almost unanimous verdict was that the hens fed nitrogenous rations gave a darker-colored flesh that was more succulent, tender and better flavored.

Although only a single experiment, the conclusions drawn were that chickens fed on an exclusively corn diet will not make a satisfactory development, especially of feathers. The bones of such fed chickens are fifty per cent stronger than those fed on carbonaceous food. Hens fed the nitrogenous food will lay more eggs, but of smaller size and poorer quality than with carbonaceous. Hens fed on corn, while not suffering in general health, become sluggish, deposit large masses of fat on the internal organs, and lay a few eggs of large size and excellent quality. The flesh of nitrogenous-fed fowls contains more albuminoids and less fat than those fed on a carbonaceous ration, and is darker colored and more tender. These considerations may well be borne in mind by those engaged in feeding hens.

Columbia, Conn.

W. H. Y.

DRINKING VESSELS.

A sick fowl will communicate disease to the whole flock through the drinking water. For this reason, if for no other, the vessel should be kept very clean. A small piece of lime in the drinking water will be a partial safe-guard; but cleanliness is more important than remedies. The drinking water is soon filthy and will quickly spread disease to an entire flock.

SONOMA, CAL., Feb. 1, 1891.

I received the Peerless Atlas, and am delighted with it. Respectfully,
MRS. M. E. SHERMAN.

CORRESPONDENCE.

WHAT TWELVE HENS DID.—I got 1,926 eggs last year from 12 hens, the eggs being worth here \$36. The cost was \$13. The best months were March, during which I got 248 eggs, and April, during which I got 252 eggs. December gave the fewest—55 eggs.
Philadelphia, Pa. A. L.

AN EGG RECORD.—Nearly every issue of FARM AND FIRESIDE gives somebody's account of egg production and money receipts from poultry. I send brief extracts from my book. It shows more eggs than any record that I have seen: On January 1, 1890, I had 32 hens, old and young, common fowls. During the year 1890 I got 425 dozen eggs, 298 dozen being sold, for which I got \$46.24, besides 127 dozen that were used in my family and for hatching. If the whole 425 dozen had been sold at the average price, the total for eggs would be \$64.10.
Lockport, N. Y. N. B.

CROSSES.—I knock for admittance in your poultry-yard, to talk with my brothers and sisters, poultry raisers, and hoping I can be benefited and probably help someone else. To J. R. G., Brownsville, Tenn., I would say that his questions have all been answered right but one, and that one is not according to experienced breeders, and the theory is not good. You cannot get any good results from crossing mixed breeds, like the Wyandotte. Now, I say for J. R. G. to try S. C. White Leghorns and Light Brahmas. By breeders this has been found to be the best all-purpose fowl there is.
Sarcosie, Mo. J. C.

[The Wyandotte is a pure breed. The cross suggested, of Leghorn and Brahma, is, however, a good one.—ED.]

INQUIRIES ANSWERED.

Draughts.—Mrs. M. H., Apolis, Pa. "What is the cause of the eyes of my fowls swelling?"
REPLY:—Draughts on them at night. See reply to C. S. P.

Brooders.—J. T., Potter Hill, R. I. "Please send me a plan for brooder."

REPLY:—We are publishing them monthly, and have already given two recently.

Indigestion.—"My hens' crops seem full of water, are heavy and large."

REPLY:—Give the hens some sharp grit, such as pounded chinaware or broken flint.

Paralysis.—E. F. B., Dell Delight, Mo. "We have had several fowls die with what appeared to be paralysis—no use of their legs. Hens that have it are usually fat."

REPLY:—See reply to H. L., this column.

Venetian Red.—Mrs. S. C. A., Newton, Kan. "How does Venetian red act on fowls? I find it valuable to use in the feed two or three times a week."

REPLY:—It is said by some to be beneficial as an appetizer, but we have never experimented with it.

Poultry-Houses.—W. H. C., Berryville, Va. "Will some of your subscribers give a plan for the cheapest and most convenient poultry house for fifty fowls?"

REPLY:—We have given quite a number during the past year, but will be pleased to hear from our readers who have plans.

Mixed Questions.—J. R. G., Brownsville, Tenn. "1. How often should a hen be fed when sitting? 2. I made a wooden trough for my ducks; what is a good preparation to make it tight?"

REPLY:—1. Once a day, in the morning, is sufficient. 2. Nail it together well, and pour wood tar on the seams.

Heavy Males.—H. L., Linden, N. Y. "What is the cause of a seemingly contagious disorder in which the hens walk perpendicularly, like a penguin? As soon as this ailment appears they cease to lay."

REPLY:—Such difficulties are usually due to heavy males being with fat hens. Remove the males.

Overfeeding.—M. P. G., Windsor, Mo. "We kept 100 hens last year, and hatched 500 hens, only one cockerel with the 100 hens, and our chicks were the admiration of all who saw them. Hens are fed with more care this year, but they do not lay."

REPLY:—Your extra care has probably resulted in overfeeding and making them too fat.

Droopy Hens.—Mrs. M. M. L. "My hens, in apparent good condition, droop, do not eat, and stand all drawn up. They continue this way several weeks and die."

REPLY:—It may be due to the large, gray lice on the skin of the heads and necks, or to roup. Remove the male from the flock, keep the hens warm, and follow directions as given in reply to C. S. P., this column.

Hamburgs.—A. L. B., Nooksack City, Wash. "1. How large are the Silver Spangled Hamburg chickens when full grown? 2. Are they a hardy breed to raise on a farm with a free range? 3. How early in the spring should Pekin ducks be hatched?"

REPLY:—1. Males should weigh about six pounds. 2. If the climate is not too severe they are hardy. 3. Ducks usually begin laying in February, and ducklings hatched in March.

Swollen Heads and Eyes.—C. S. P., Utica, Ohio. "What is the matter with my hens? They are apparently healthy, but their heads and eyes swell up, and they have a hoarseness like a bad cold."

REPLY:—Due to exposure to draughts on them at night, probably through a crack, or from a top ventilator. Anoint head and eyes with a few drops of a mixture of one part spirits of turpentine and three of sweet oil, and add a tablespoonful of chlorate of potash to each quart of drinking water.

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A large profusely illustrated Book of 128 pages, containing more than 100 Dollars' worth of valuable information to poultry raisers, will be sent by return mail, post-paid, for only 25c. including the HOUSEHOLD PILOT 6 months trial, a large 8 page, 40 column illustrated household paper; one of the best in America. We make this great offer to introduce our paper into new homes. Address, Pilot Publishing Co., New Haven, Conn.

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If afflicted with sore eyes use Dr. Thompson's Eye-Water

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

EXTRACTS
FROM CORRESPONDENCE.

FROM KANSAS.—Rice county is a beautiful country. A great deal of wheat was sown and looks well. Corn was a poor crop last season, and it is now worth 50 cents per bushel. The Farmers' Alliance is strong here and we hope it will be stronger in another year. L. F. Chase, Kan.

FROM TENNESSEE.—We had but little snow here this winter. Land is worth from \$15 to \$40 per acre. We produce wheat, rye, wool, apples, pears, plums, cherries and small fruits of many kinds. Dairying is an important interest, as we have excellent grass. The timber is oak, gum, cypress, poplar, etc. The churches are Presbyterian, Methodist, Episcopal, Norwegian, Lutheran and Baptist. Schools are very good. Farmers' Alliances are being organized in some parts of the county. A living for everybody who will work in good faith. Ariadne, Tenn.

FROM WISCONSIN.—We are having a big boom in new settlers from the East, and those who have come are well pleased. The best farm lands are so cheap that anyone can afford to buy forty acres. Unimproved land can be bought at from \$3 to \$5 per acre. The soil is a good, sandy loam, level, and with few or no stones. It will raise all kinds of grain and hay. These same lands will soon be worth from \$50 to \$75 per acre. Good, improved lands can be bought at from \$5 to \$10 per acre. There is a good home market for all the farmers raise, as our lumbermen and miners consume it all and pay better prices than Milwaukee or Chicago do. Our climate can't be beat for good, bracing, pure air. G. W. H. Stevens' Point, Wis.

FROM ILLINOIS.—Williamson county is in the southern part of the state. It has a fertile soil. We have good crops nearly every year. All the cereals do well. Parts of this and joining counties are hilly, but well adapted to raising grasses and all kinds of fruit. Coal is abundant in different parts of the county. Raising hogs, horses and poultry pays well. There are tolerably good markets for all kinds of farm produce. Land is worth from \$10 an acre upward, according to location and improvement. The climate is healthful. We have good schools and churches of different denominations, mostly Methodist and Baptist. Some people will leave here and go farther west, but they generally come back within a year. H. R. W. Corinth, Ill.

FROM MICHIGAN.—Otsego is one of the best counties in northern Michigan. The land is good and heavily timbered with hard maple, elm, basswood, birch, beech and hemlock. Both fall and spring wheat do well here, as do rye, oats and buckwheat. I have lived here over eight years, raised corn every year, and never had less than eighty-two bushels per acre, except one year. We can compete with any section of the country raising potatoes. This is a good place for men with small means to get a good home. Work is plenty, wages good and land cheap. We have to sink our wells about thirty to thirty-five feet and get the best of water. Running streams are plenty. R. D. S. Vanderbilt, Mich.

FROM KANSAS.—Doniphan county is situated in the north-east corner of the state. It is bounded on three sides, almost, by the Missouri river. Nearly every half section has constant running water, and being so near the great Missouri river it is very rolling, and along the river it is bluff. The natural fertility of the soil is unsurpassed and the seasons are regular. I left the Pretty Prairie, Champaign county, Ohio, April, 1858, and have lived here ever since, and know what I am saying when I make the assertion that for climate, regular seasons, good soils, healthfulness and everything that makes a country desirable, Doniphan county is second to none. I have lived here thirty-three years and have not had a failure, but have always had enough and some to spare. With proper care the soil is inexhaustible. Good markets. Everything grown in a similar latitude does well here. Doniphan county, Kan. J. S. M.

FROM MISSISSIPPI.—Alcorn county is in the extreme northern portion of the state. Alcorn is divided by two railroads. Memphis is ninety miles away and a ready market, both for buying and selling. The farmers are paying attention to horticulture and it pays better than raising cotton. Fine stock of all kinds are raised profitably. Jersey cows give better satisfaction for butter, Short-horns and common grade for beef. Our farmers are proud of their colts shows they have every year. Norman, Cleveland Bay and Mercer stock are taking the lead, commanding from \$100 to \$250. Sheep raising pays well. The highest market price is paid for wool at the Alcorn woolen-mills. Our lands are good and range in price from \$1 to \$30 per acre. We have fine bottom lands and they are heavily timbered with hickory, walnut, ash, poplar and the different kinds of oak. Our hill lands are timbered with fine pine. Our lands produce from one half to one bale of cotton per acre, and from fifteen to forty bushels of corn. Irish potatoes and sweet potatoes are two of the main crops. The hay crop pays

well and some of the farmers ship hay at good prices. French and Germans have vineyards and a large quantity of wine is made and shipped. Our climate is mild and very healthy. Public schools all over the county. Corinth, Miss. M. W. S.

FROM MISSOURI.—Harrison is as good a county as there is in the state. Land is rolling, and in places, broken; the soil is mostly black loam, well watered; and there is some fine timber. We can raise almost everything, have no failure of crops and have a good market for everything we raise. We have good schools and plenty of churches, a good class of people, but they do not have the go-ahead of the eastern people, do not improve their homes as well. I would like to see some of brother Ohio farmers come out here and buy some of this cheap, good land. Good, improved land can be had for \$10 to \$20 per acre. Sheep raising is a success. We can grow wool here as cheap as anywhere, as this is a clover and blue grass country. Our winters are mild. Land is cheaper than anywhere that I know of for the quality. E. H. P. Bethany, Mo.


FROM WASHINGTON.—Washington is a wonderful state as to its natural wealth, timber, iron, coal, agricultural land, fine harbors, etc. Lewis county is one of the richest counties for agricultural purposes, with its rich valleys and rolling hills nearly all covered with tall timber. The timber is principally cedar and fir, the average size of which is from thirty to seventy inches in diameter, and from one hundred and fifty to three hundred feet long. Railroads are building from all directions into this most valuable timber, affording employment to all. When the timber is finally used up, the country will be all the richer, for it is the very best of fruit and grain land. Prunes, plums, pears, apples, peaches and all kinds of small fruit do well. The largest and most extensive coal fields in the North-west are in Lewis, Pierce and King counties. Land can be bought here for from \$10 to \$30 per acre. There are thousands of acres of vacant government and railroad lands which will be worth fortunes in the near future. Ferry has one store, one hotel, one blacksmith shop, one cooper shop, one feed stable and one saw-mill—all yearlings. K. B. Ferry, Washington.

FROM IDAHO.—The western portion of Washington county, along Snake, Fayette and Weiser rivers has level valleys of rich, black, sandy loam, covered with sage brush and bunch grass. The valleys range from one mile to ten in width, with rolling hills covered with grass back from the valleys and forming into mountains in the background, where ledges of precious mineral and heavy pineries are located. Numerous springs of pure, cold water break out over the valleys, hills and mountains, forming excellent ranges for sheep, horses, cattle and hogs. Stock is generally fed from two to six weeks in the year. Water is plenty for irrigating purposes, but crops require very little irrigating to insure large yields, compared with other irrigating countries. Most places wells are dug, and good, soft water is found from ten to thirty-five feet deep. Land that can be easily covered with water is about all taken up and held in large tracts at from \$10 to \$20 per acre. All kinds of grains, grass, vegetables and fruit, such as apples, pears, peaches, prunes, grapes and small fruit, yield large crops. The market is good for everything raised. H. M. Weiser, Idaho.

FROM MASSACHUSETTS.—Berkshire county in Massachusetts extends entirely across the west end of the state, from north to south a distance of about fifty miles, and embraces an area of 950 square miles. There are thirty-one towns and one city, Pittsfield, in the county. This is one of the most thrifty farming counties in the state, well watered, with plenty of wood and excellent quarries of lime and marble. The national capitol at Washington is largely built of marble from this county. The farmers are mostly to the manor born and are generally well read and intelligent. There are several thrifty manufacturing centers, which afford a ready market for almost everything farmers can produce. Hay sells at \$10 to \$15 a ton; potatoes and apples, \$1 to \$1.25 per bushel; oats, 60 cents; corn, 80 cents, and buckwheat, 80 cents; eggs, 35 cents a dozen, and butter from 25 cents to 35 cents a pound. The Boston and Albany railroad crosses the county at Pittsfield, and the Hoosac Tunnel and Fitchburg road crosses in the northern part, while the Housatonic road runs lengthwise the county. The educational facilities are excellent, with Williams college, one of the oldest in the country, in the north part of the county. These Berkshire Hill towns are rapidly becoming popular resorts for summer visitors from all parts of the country. The town of Lanesborough, beautiful for situation, five miles north of Pittsfield, is nearly the watershed of the county, with an altitude of from 1,500 to 2,000 feet above the sea-level. Greylock mountain, near by, is the highest land in the state, 3,500 feet. The population of the county is 81,078. Lanesborough, Mass. J. A. R.

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SHEEP Full instructions how I killed ticks and lice on my sheep, will be sent to anyone sending me 50 cts. Can be applied at any time. No dipping required. Address **W. MERRING, Kizers, Lacka, Co., Pa.**

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Mention Farm and Fireside when answering advertisements.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the querist should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Subsoil Plow.—A. H., Mendon, Mich. You can get a good subsoil plow of Deere & Co., Moline, Ill.

Book on Carp Culture Wanted.—R. D. P., Jefferson, N. Y. Send sixty-five cents to L. B. Logan, Youngstown, Ohio, for "Practical Carp Culture."

Butter Extractor.—T. W., Minersville, Kan. The butter extractor is now manufactured by the Vermont Farm Machine Co., Bellows Falls, Vt.

To Remove Wool from Sheep Skins.—P. J. F., Middletown, Idaho. To remove wool from sheep skins, spread on the flesh side a paste made of equal parts of slacked lime and hard wood ashes, made with soft water. After spreading on the paste, roll up the hide, flesh side in, and put it to soak in a vat of water. Leave it until the wool pulls off easily.

Waterproof Sash-Cloth.—G. C., Lorraine, Tenn., in answer to an inquiry about waterproof sash-cloth, writes: "Tuto one and one quarter gallons of boiled linseed oil, stir one quarter of a pound of rosin and one ounce of sugar of lead. Apply while hot with a paintbrush. I prefer this waterproof cloth to glass for the inexperienced. The plants do not grow so spindling. The sashes are easily handled and do not break."

Secretaries of Agricultural Organizations.—In answer to a number of inquiries, we give the addresses of secretaries of agricultural organizations to whom they can apply for information: National Grange, John Trimble, 514 F street, Washington, D. C.; National Farmers' Alliance, August Post, Moulton, Iowa; National Farmers' Alliance and Industrial Union, J. H. Turner, Washington, D. C.; National Farmers' League, Herbert Myrick, Springfield, Mass.

Whitewash.—C. E. S., Marine, Ill. Take nice, fresh-burned, unslacked lime, one half bushel; slack it with boiling rain-water, keeping it covered during the process to keep in the steam. Add to this one peck of salt, dissolved in water. Then add five gallons more of hot water, and stir the mixture well. Cover it up and let it stand a few days. Apply it hot. Some thin it with skimmed milk. The secret of making it stick well is to have good lime, well mixed with the salt and applied hot.

Bone Ashes.—D. B., Wisconsin, writes: "Will it pay me to burn bone in the large furnace heating my residence? Can burn five or six bushels of bone by wood fire, at one time. Is there any value in the ashes from burning old leather?"

REPLY BY JOSEPH:—The ashes from the bone and wood will make a most excellent fertilizer for all crops, worth probably \$15 a ton. The addition of leather to the fuel will not add anything to the value of the ashes produced.

Bees.—S. L. P., Canton, Ohio, writes: "When bees swarm, is it the old queen that leaves the hive? If I kill the queen, will the bees return to the hive?"

REPLY:—Yes, in first swarms the old queen goes out with the swarm. In afterwards the queens are young. If a swarm loses its queen in any way, it will return to the hive. If you are interested in bees, get a good book on the subject. The A B C of Bee Culture, advertised by A. I. Root in last issue, is a good one.

Lime for Muck.—Dr. A. C. W., Illinois, asks: "How much dry, slacked lime should I use per square rod of garden? Have put on muck three inches deep, and it is dry and fine."

REPLY BY JOSEPH:—I would have preferred to compost the muck with lime, ashes, etc., before applying. But you may put on as much dry, slacked lime as you please; it will do no hurt. Try a peck or more per square rod, and work muck, lime and upper layer of soil well together. This will probably give it the right texture.

Preserving Meat for Summer Use.—H. L. S., Richmond, Ind. Farmers usually do their butchering before midwinter. The meat is put down in brine for six weeks. It is then taken out, drained, and the flesh side is thoroughly rubbed with finely-pulverized black pepper. It is then hung up and smoked. The smoking should have been done by this time. If you have a good smoke-house, dark and cool in summer, you can leave the meat hanging there without danger from insects. After they are smoked, many put the hams and shoulders, after wrapping them in paper, in paper flour-sacks and hang them in a cool, dry, dark place.

Rats.—F. D. A., Ammendale, Md., writes: "For some time we have been troubled with large numbers of rats. Last summer they killed many of my young chickens. We have tried poisoning them, but in a short time they are as bad as ever. How can we get rid of them?"

REPLY:—By traps, poisons, dogs and cats. Evidently you are in a neighborhood badly infested with rats, and when you kill off all on your own premises, outsiders soon come in and take possession. You must keep up a constant warfare against them. The best way to do that is to keep good cats. Use traps and poisons until you have killed as many as possible, then keep several cats. You will have to keep several in order to be sure of having one good rat. But a few good ones will keep your premises clear of rats and mice.

Sweet Corn for Canning.—W. A. B., Souris, Prince Edward Island, writes: "How is sweet corn sold to the canning establishments; by the bushel shelled, or by the dozen ears, or by weight, and what is the average price?"

REPLY BY JOSEPH:—Perhaps one or the other of the members of the FARM AND FIRESIDE family can give information concerning prices now being paid. I have never lived near a sweet corn canning establishment. Of course, the green corn is usually sold by the ear or bushel. Years ago I grew some for an evaporating concern, and received one cent per ear. At that rate it is a paying business for the producer.

Ashes—Falling Stars—Coal or Wood—To Destroy Worms in Water.—J. R. G., Brownsville, Tenn., asks: "(1) What is the best use for hickory ashes? (2) When did the so-called phenomenon of falling stars occur? (3) Which is cheaper for family use in the kitchen, coal or wood? (4) How can I destroy the small, white worms in my well?"

REPLY:—(1) That depends upon circumstances. You can make potash of them, if you have any use for it, or you can use them for

fertilizer if you have any need of that. (2) Hardly a clear night passes on which falling stars or meteors cannot be seen. But at certain times in the year they are much more numerous than others. Every year in the second week of August the earth passes through a stream of meteors which encircle the sun in an elliptical orbit. Some years they are more frequent than others. On November 13, 1833, occurred the most wonderful meteor shower ever recorded. We presume your question refers to this. (3) That depends on the cost of each. Where the wood is plenty and cheap, it is used in preference to the coal. Where the latter is cheaper it is used with entire satisfaction. (4) Put fresh lime in your well and then pump all the water out.

VETERINARY.

Conducted by Dr. H. J. Detmers, Veterinarian of the Ohio Agricultural Experiment Station, and Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

Ringbone.—F. C. W., Inwood, Iowa. Consult answer to similar question in FARM AND FIRESIDE of December 15, 1890.

Periodical Ophthalmia.—W. L. R., Chapman, Kan. Your horse is affected with periodical ophthalmia (so-called moon-blindness), a disease which almost invariably leads to blindness, especially if the eyeball is already smaller or "shrunk," as you say. Hence, a treatment will be of no avail.

Probably Distemper.—C. W., Gig Harbor, Wash. Your dog, probably, is suffering from dog distemper. When this reaches you, the animal either has recovered, or has become incurable and worthless. The disease can frequently be cut short, if in the beginning (during the first stage) a good emetic of powdered, white bellobore is given. In your case it is too late.

Larva of Oestrus Boris.—R. A. B., West Rushville, Ohio. So-called warbles are produced by the larva of the gad-fly, Oestrus boris. The best way, this season of the year, is to slightly enlarge the opening in each boil, then to press out the larva and to kill it at once by stepping with the foot on it, when it falls to the ground, so that it may not produce a gad-fly.

Hollow-horn.—C. A. T., Fowler, Ohio. There is no disease which might be called "hollow-horn." It is a term sometimes used to cover ignorance, nothing more. In malignant catarrh of cattle the horns sometimes loosen and slough off; but that cannot be called "hollow-horn." The horns of all neat cattle are hollow. In the above you will also find an answer to your second question.

Malignant Edema.—S. C., Mt. Idaho, Idaho. Your calves died of malignant edema, or so-called black-leg. A prevention by a protective inoculation is possible; but as it is very doubtful whether you can get anybody who knows how to do it, the best advice I can give you is to keep your calves away from the dangerous places where the disease is contracted. A treatment is hardly ever of any avail.

Possibly Farcy.—O. J. S., Lee Park, Neb., writes: "I have a horse that has running sores on one of her front legs. They have been there for some time and are hard to heal."

ANSWER:—Such running sores that will not heal must always be looked upon with suspicion. The disease, possibly, may be farcy. I therefore have to advise you to inform your state veterinarian, and to request him to make an examination.

Gleet.—W. P., Valencia, Kan. The simple fact that your horse has a watery discharge from the nose, does not convey any idea whatever as to the nature of the disease. You speak of "gleet." What people call "nasal gleet" is usually nothing but the first stage of glanders. If you think your mare is afflicted with that disease, notify your state veterinarian. It is his duty to make a thorough examination, and to decide that question.

Splints.—H. S. L., Gullitt, Ill. Pare away a little of the sole and lower border of the wall of the inside of the hoof, so as to give the animal a slightly knock-kneed position, and thus to relieve the head of the inner splintbone. This done you may rub in on the splint, once a day, a little gray mercurial ointment, about as much in size as a pea, at a time; or, if you prefer, you may apply gentle but constant pressure by means of bandaging.

Periodical Ophthalmia.—Oneonta, N. Y. Your colt evidently suffers from periodical ophthalmia (so-called moon-blindness), a disease which rarely ever admits recovery, and almost invariably terminates in blindness, especially if both eyes are affected. So-called wolf-teeth have nothing to do with the eyes. The predisposition to periodical ophthalmia is hereditary. If you desire to attempt a treatment, I refer you to former numbers of this paper.

Boils.—T. O., Portsmouth, Va. I hardly know what to make out of those peculiar boils you describe. Still, it will be safe to apply some antiseptic, perhaps some iodoform, which may be sprinkled on a small bunch of absorbent cotton, and thus be patched on the boil. Renew the iodoform and the cotton twice a day. If no improvement should take place in a week or ten days, you may apply some caustic, perhaps finely-powdered sulphate of copper.

Habitual Abortion.—T. M. E., Atkinson, Neb., writes: "I have a mare that lost her colt the first time she was in foal. The next time she had her colt all right, but twice since has lost her foal. She is in foal again. Can anything be done to prevent her losing it?"

ANSWER:—There can not. All you can do is to keep the animal under good sanitary conditions, and to avoid violent exercise. As a rule it does not pay to breed such an animal.

Weakness.—H. W., Secor, Ill. Your cow evidently suffers from weakness, but whether the same is caused by insufficient food as to quantity or to quality, or whether the animal system is debilitated by some morbid process, does not proceed from your communication. At any rate, feed her sound and nutritious food, easy of digestion, and stop milking, because the production of milk is a drain on the organism. If she is heavy with calf, however, you will hardly be able to produce any improvement until after calving.

Thin in Flesh.—R. M. R., Sandusky, Ohio., writes: "My horses keep thin in flesh. They have the best of food, consisting of good corn, timothy hay, bran and oil meal. I keep them in a barn with thirty head of milch cows. Is that the cause?"

ANSWER:—There are too many possibilities.

Endorsement by men and women of the character and standing of those who recommend ALLCOCK'S POROUS PLASTERS is unquestionable proof of merit.

Mrs. Henry Ward Beecher writes:

"40 ORANGE STREET, BROOKLYN, N. Y., February 11, 1890.

"I have used ALLCOCK'S POROUS PLASTERS for some years for myself and family, and, as far as able, for the many sufferers who come to us for assistance, and have found them a genuine relief for most of the aches and pains which flesh is heir to. I have used ALLCOCK'S POROUS PLASTERS for all kinds of lameness and acute pain, and by frequent experiments, find that they can control many cases not noticed in your circulars.

"The above is the only testimonial I have ever given in favor of any plaster, and if my name has been used to recommend any other it is without my authority or sanction."

The Rev. Mark Guy Pearce writes:

"BEDFORD PLACE, RUSSELL SQUARE, LONDON, December 10, 1888.

"I think it only right that I should tell you of how much use I find ALLCOCK'S POROUS PLASTERS in my family and amongst those to whom I have recommended them. I find them a very breastplate against colds and coughs."

Russell Sage, the well-known financier, writes:

"506 FIFTH AVENUE, NEW YORK CITY, December 20, 1890.

"For the last twenty years I have been using ALLCOCK'S POROUS PLASTERS. They have repeatedly cured me of rheumatic pains and pains in my side and back. Whenever I have a cold, one on my chest and one on my back speedily relieve me.

"My family are never without them."

Henry A. Mott, Jr., Ph.D., F.C.S. late Government chemist, certifies:

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Marion Harland, on page 103 of her popular work, "Common Sense for Maid, Wife, and Mother," says:

"For the aching back ALLCOCK'S POROUS PLASTER is an excellent comforter, combining the sensation of the sustained pressure of a strong, warm hand with certain tonic qualities developed in the wearing. It should be kept over the seat of the uneasiness for several days—in obstinate cases, for perhaps a fortnight."

W. J. Arkell, publisher of Judge and Frank Leslie's Illustrated Newspaper, writes:

"JUDGE BUILDING, COR. FIFTH AVE. AND SIXTEENTH STREET, NEW YORK, January 14, 1891.

"About three weeks since, while suffering from a severe cold which had settled on my chest, I applied an ALLCOCK'S POROUS PLASTER, and in a short time obtained relief.

"In my opinion, these plasters should be in every household, for use in case of coughs, colds, sprains, bruises or pains of any kind. I know that in my case the results have been entirely satisfactory and beneficial."

SALZER'S SEED POTATOES

There is genuine pleasure in cropping from 300 to 500 bushels Potatoes from each and every acre you plant. Now the way to do this is to get SALZER'S SEEDS. 60,000 BUSHELS SEED POTATOES CHEAP.

My WHITE BONANZA OATS took the American Agriculturist's prize—\$500 in Gold—for biggest yielding Oats in America; cropping 184 bu. per acre.

I am the largest grower of 35 Packages Earliest Vegetables, NORTHERN GROWN SEEDS sufficient for family—postpaid—\$1. in America, and make a great specialty of FARM SEEDS. Grasses, Clover, Wheat, Corn, Oats, etc. My Farm Catalogue is beautifully illustrated, contains several brilliant color plates painted from nature, elegant enough to adorn any parlor. Send 5c. for same, or we will send Catalogue and grain sample upon receipt of 5c.

JOHN A. SALZER, LA CROSSE, WISCONSIN.

You may try and leave off the bran and oil-cake meal (no good food for horses anyway) and substitute good oats.

Incipient Rat-Tail.—A. J. F., Point Rock, O., writes: "What is the matter with my mare? She is twelve years old and in good flesh. She has shed most of the long hair out of her tail."

ANSWER:—Your mare has, or is getting, what is commonly called a "rat-tail." There is no remedy. You may possibly be able to stop the loss of hair by a thorough cleaning of the tail with soap and water, and after that, by applying a wash of a solution of corrosive sublimate, 1:1000.

Weakness.—S. C. H., Brinkley, Tenn., writes: "I have a fine Jack colt eighteen months old. His knees have recently pitched forward. Will you tell me what causes it and the best thing to do for him?"

ANSWER:—Your colt, probably, is too weak, does not receive sufficiently nutritious food, or its food is lacking in necessary constituents. Feed good hay, good oats, and some bran. If the legs are very weak, you may be able to give the animal some temporary support by judicious bandaging, but don't forget that every bandage must be renewed at least twice a day, and that the bandaging invariably must be begun at the hoof.

Actinomycosis.—C. C. B., Hinton, Iowa. If the swelling is slightly movable, and not attached to the bone, it may be cured; but if attached to and proceeding from the bone, it is incurable. For treatment I have to refer you to the last issue of this paper, in which a detailed description of the treatment is given, or else you may apply to Chas. E. Thorne, director of the Ohio Agricultural Experiment Station, and ask him to send you a copy of Bulletin No. 3, of volume III, second series, in which you will find a full account.

Discharges from the Nose in Sheep.—A. C. T., Fraskwood, Ark. What you want a remedy for may be due to various causes; in fact, be a symptom of quite a number of diseases of the respiratory organs, including the respiratory passages and the accessory sinuses. I therefore, not knowing the cause and nature of the disease in your case, cannot give you any remedy. Sheep are apt to be snotty if they have vestrus larvae (grubs) in the nasal cavities, or in the frontal or maxillary sinuses; also when they are afflicted with lung-worms.

Spavin.—W. L. B., Lena, Ill., writes: "I have a mare about ten years old that is lame in her left hind leg. Some call it a bog-spavin and others say it is a strain. She has been lame, off and on, for two years. The place affected is in the knee joint; it is swelled just like a puff and the bunches are soft and seem to be filled with water. There is a bunch in front of the knee and on both the outside and inside. I have blistered it twice, but that does not help it any. She walks and stands on the front part of the foot."

ANSWER:—The bog-spavin, it seems, hides a bone-spavin, which latter causes the lameness. Blistering can do no good, unless it is done judiciously, and the animal has sufficient rest to allow the production of ankylosis. For further information please consult the articles on the treatment of spavin and ringbone in previous numbers of this paper.

Wart on Horse.—J. W. S., Roseburg, Oreg., writes: "It is immediately over the right eye and hangs down over the eye, nearly blinding him. It is larger now than an egg. This is the third or fourth time it has grown. Have been using lunar caustic without effect, and latterly hog's lard, but of no use. Cut it off one time with a knife, still it grew again; got rid of it another time by using a ligature of horse-hair and silk, but after a time he rubbed it off. I would like to know how, not only to get rid of it, but to stop its growing again."

ANSWER:—Try once more a ligature made of a waxed end prepared by your shoemaker, and then, after the wart has been removed, paint a few times, by means of a camel's hair pencil, the place over, but carefully, so that nothing gets into the eye, with a concentrated solution of corrosive sublimate in alcohol.

Garget—Remedy for Colic.—H. H. M., Warren, R. I., writes: "What is 'garget,' and is the milk from a cow ever so slightly affected with the disease fit for use? I have

EVERBEARING STRAWBERRY. BEARS fruit from May until frost. Descriptive price list free. Seth Winquist, Russellville, Ore.

ROSES OUR SPECIALTY.

20 beautiful, ever-blooming Roses for \$1.05 (will make a nice bed.) The Manettia Vine and Solanum Jasminoides Grandiflora 15 cents each. Childs' Japanese Wine Berry 25 cents. A plant of the New Japanese Chrysanthemum, No. 31, the earliest, largest and most beautiful of all, sent free of charge with each order. Our Illustrated Catalogue of Roses, Chrysanthemums, Dahlias and everything else with which to beautify lawn, flower garden and conservatory, sent free to all upon application. Send for it now, as this will not appear again. A. B. Davis & Son, Purcellville, Va.

IDEAL JUNIOR.

Has fewer parts and joints, hence simplest. Is the

Lightest, Strongest, Cheapest,

of all Sectional Wheel Wind Mills. Is thoroughly well made of best materials. Runs without a tail and governs perfectly. We stand behind the Ideal Junior with a strong warranty. Prices and catalogue cheerfully furnished.

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been told that the lightest attack of garget can always be detected in washing the pans where milk has stood for any length of time, the smallest addition of soap to the water making the cloth become slimy at once. Is this a fact? A word about that much-abused remedy for colic in horses, vinegar and chalk. It has been used to my knowledge, for a horse subject to colic, with the best results, when other remedies failed. It is used also by keepers of livery stables, and has been found an excellent thing, relieving the animal almost immediately. As to your theory that because the chalk creates such a commotion in the vinegar, it must increase the gas in the horse's stomach, I will say that this might be the case if the two ingredients were given separately. But, as in all combination powders, the two are mixed before taking. The result is the removal of the gas, and not an increase of it."

ANSWER:—Garget may be defined as an inflammatory affection of the mammary glands, caused by a coagulation of the milk. As to what you have been told, don't be too credulous, and don't implicitly believe the stories of—perhaps, a joking neighbor. What you say in regard to your much-abused remedy (?) of colic plainly shows that you have not the faintest idea of the pathology of the various diseases collectively called colic. If you have good success (?) with your nostrum, I will not quarrel with you, but don't expect me to endorse any such nonsense, nor to recommend such a nostrum to other people.

Our Fireside.

NOT AS I WILL.

Blindfolded and alone I stand,
With unknown thresholds on each hand;
The darkness deepens as I grope,
Afraid to fear, afraid to hope;
Yet this one thing I learn to know
Each day more surely as I go,
The doors are opened, ways are made,
Burdens are lifted or are laid
By some great law, unseen and still,
Unfathomed purpose to fulfill,
"Not as I will."

Blindfolded and alone I wait—
Loss seems too bitter, gain too late,
Too heavy burdens in the load,
And too few helpers on the road;
And joy is weak, and grief is strong,
And years and days so long, so long;
Yet this one thing I learned to know
Each day more surely as I go,
That I am glad the good and ill
By changeless law are ordered still,
"Not as I will."

"Not as I will!"—the sound grows sweet
Each time my lips the words repeat.
"Not as I will!"—the darkness feels
More safe than light when this thought steals
Like whispered voice to calm and bless
All unrest and all loneliness.
"Not as I will!" because the One
Who loved us first and best has gone
Before us on the road, and still—
For us must all his love fulfill—
"Not as we will."

—Helen Hunt Jackson.

THE NUGGET OF GRUB-STAKE GULCH.

BY JAMES OTIS.

CHAPTER IX.

A FORCED DECISION.



WHEN finally the envious and curious miners dispersed, Seth was able to begin the day's work; but at least two valuable hours had been wasted.

Ned had long since filled the bucket with earth; was beginning a tunnel in the direction from

which the nugget had been taken, and in reply to Seth's question he shouted:

"Don't worry about my not being strong enough to keep on here for a week, if necessary. You attend to the windlass 'till noon, and then I'll take my turn at it."

"Have you seen any color?"

"I've got about half an ounce of gold; but haven't found anything for the last hour. I tell you what it is, Seth, there are many doubts in my mind as to whether we shall pan out enough to pay day wages."

"But it doesn't seem impossible the big nugget was alone," and Seth, now considerably excited, descended the rope without regard to the full bucket he had been requested to draw up. "By putting a shaft through in that direction we should find a vein."

"That is a poor argument, more especially since it is a well known fact that a pocket is no indication to be relied on. It wouldn't be strange if we didn't find another ounce within half a mile of this claim."

Since the golden cross had been discovered at some distance above the bottom of the shaft it was not absolutely necessary that all the dirt should be taken out, and Seth wielded the pick until obliged to work in a stooping posture because of what he had packed beneath his feet; but yet there was no further sign of treasure.

Not until noon did he cease his work, and then, just as he was on the point of suggesting that they go to the cottage for dinner, a piece of brown paper, dropped from the edge of the shaft, fluttered this way and that until it fell at his feet.

"I'll wager my share of the nugget that I know what it is," he said as he picked up the carefully-folded fragment, and on opening it the following lines were disclosed:

"This is a notice for Morey to leave town within two days, or run the risk of meeting them who know him from way-back. There ain't goin' to be no more foolin' done in St. Julian."

Seth handed the paper to Ned, and when the latter had read it he said:

"Conestoga Joe wrote that. He offered me five thousand dollars for the claim, and has adopted this course to make sure we'll accept it."

"Do you think he can muster force enough to drive me away?" Ned asked after a short pause.

"Without a question. Seven-eighths of the men do his bidding because of the hospitality of the Palace, and we may as well look at the matter squarely. I went to see him last night when you thought I was hunting for your horse, and have a pretty fair idea of how far he will go in order to effect his purpose."

"I wish I knew why he is so anxious to get rid of me."

"So do I, and perhaps we can hit upon the solution presently. At all events we have forty-eight hours before us, and the most important matter just now is to get our dinner." The two clambered out of the shaft in

silence. Aside from the warning to leave they had good reasons for being disheartened. They were apparently no nearer a realization of their hopes than before the nugget was found, and Seth was more than disappointed with the indications.

Now that Morey had been ordered to leave town in such a short space of time, the miners, probably acting upon Mr. Grant's suggestion, greeted the partners only with threatening glances and menacing gestures as they passed up the street on the way to Seth's cottage, and this condition of affairs, more than the written notice, gave proof of Conestoga Joe's power.

As a matter of course, Alice was made acquainted with what had happened during the forenoon, and she, understanding reasonably well why Ned was to be driven out of town, felt decidedly alarmed.

"Why not accept Mr. Grant's offer?" she asked anxiously. "You are afraid the pocket which has been found is the only one there, and five thousand dollars will repay you for all the labor expended."

"The idea of being forced to run away is not a pleasing one," Ned replied grimly. "I had rather take the chances than let them think me a coward."

"They have no reason to believe anything of the kind," she said emphatically, and then realizing because of Seth's glance that she was championing Ned's cause in rather more than simply a friendly manner, she added as a deep flush rose to her cheeks, "I mean that such an idea need not be advanced in the argument. I would be very glad if my brother and I could go away, and Mr. Grant's offer gives us the opportunity to do so."

"In that case I ought to say nothing more," Ned replied. "Seth has a greater interest in the double claim than I have, and it should be for you and he to settle the matter."

"My share is no greater than yours."

"Certainly it is. You paid the same price

trade. Grant must necessarily pay in cash, since there are no banks here, and our departure need not be delayed beyond to-morrow morning."

While this forced decision was being arrived at, the proprietor of the Palace was attending to certain details he believed would insure the sale of the double claim, from the proper working of which he was positive such large profits could be realized.

He began by summoning Big Bill, and instructing him to call in two hangers-on who, from honest miners, had been transformed into worse than idlers through the refining influences of the Palace.

Mr. Grant's scheme, as he disclosed it to the half-drunken desperadoes, after much "beating about the bush," simply consisted in having Seth's cabin set on fire. The destruction of the dwelling would, he believed, force Alice and her brother to take refuge at the Palace, since there were no unoccupied dwellings in St. Julian, and also afford a good opportunity of driving Morey out of town. While the house was burning, and when Seth and his sister were in a state of excitement, it would be a comparatively easy matter to get rid of the tenderfoot. This last accomplished, the claim, or at least one half of it, transferred to him, and Alice thrown more or less in his society, was all Conestoga Joe desired. His superior intellect and natural graces of body must perforce command her love in a short time.

It was a bold plan; but Mr. Grant firmly believed in the adage of "Faint heart never won a fair lady," and at the same time that the quartette were discussing the details in the "private office," Alice was using her influence to have the sale consummated.

Big Bill made a few feeble objections to the project after it was unfolded, and Mr. Grant said sharply:

"I had rather have the double claim than



for the claim, and have worked here four months, all of which labor was necessary to find the nugget that has so suddenly increased the value of the property."

It was a spirited discussion which followed, and so engrossed was Alice that all thought of dinner fled from her mind until the lengthening shadows told of the approach of night.

"Then it is agreed that the double claim shall be sold to Conestoga Joe," Seth said finally. "We have wasted the entire afternoon, when it might have been possible to determine with more certainty its true value."

"In this matter your sister is clearly entitled to the deciding vote, and as she is so eager to pull up stakes I am perfectly satisfied. Suppose you conclude the trade this evening."

"Do, Seth, and then we can all go to-morrow. You will have no difficulty in finding a pony for me, and we'll start out like children of Israel in search of the Promised Land, not abounding in milk and honey, but free from such people as Mr. Grant."

"But what is to be done with the household goods I accumulated for your especial benefit?" Seth asked with a laugh.

"Leave them here until you know where we are to make a permanent home. It will be nothing more than a pleasure excursion to start out in search of an abiding place, if we are not hampered with too much baggage."

"Miss Hammond is right," Ned added enthusiastically. "We shall have a jolly time if nothing more, and I for one am anxious to set out with such companions."

So far as Seth knew there was no reason why Alice should blush because of a commonplace remark like this; but yet she did, and, becoming aware of the fact, ran into the kitchen to hide the suspicious color.

"I can at least wait for my double meal in which dinner and supper is supposed to be combined," Seth said laughingly, "and after that there will be plenty of time to make the

Seth's sister for a wife; but by this plan both are possible. If the shanty catches fire to-night she'll have to come here for a shelter, and we'll toss up to see which shall have the first chance to make his talk."

"But s'pose the game don't work?"

"Its got to unless these chumps lose their heads."

"When are they to begin?"

"Jest after dark, and then the boys can make a night of it, for a fire'll stir 'em up a bit."

"What's to be done with the tenderfoot?"

"Shoot at him two or three times to let him know what may be expected if he shows fight; but it'll be best not to take very good aim, for we don't want to give her another chance to take care of him."

The expression on Bill's face told that he had very little faith in the success of the plan; but he made no further remark, and his silence was accepted as acquiescence.

Mr. Grant lost no time in preparing, after his own peculiar fashion, the men for their work, and so industrious was he in this that by the appointed time they were decidedly under the influence of the liquids administered.

"You're all right now," the proprietor of the Palace said approvingly. "Get over near the shanty and watch for a good chance. Remember, Seth's sister mustn't be hurt or frightened very much; but see to it that the tenderfoot is fixed so he'll be glad to skip."

The men departed to carry out their portion of the nefarious plot, and Conestoga Joe said, as he rubbed his chin complacently:

"It won't do any harm, Bill, to git into a better rig, seeln's how we're likely to have company before long."

"Wouldn't it be a give away to show she was expected?"

"Perhaps you're right; but I don't like to have her see me in this outfit."

"It may be she won't have—"

Bill ceased speaking very suddenly, for at this moment the door was opened, and on the threshold the conspirators saw Seth Hammond.

Both started in alarm, thinking he had by some possibility learned of their purpose and intended to wreak vengeance upon them, for, quiet though he was, no one in St. Julian ever doubted his courage.

"Hello, Seth," Mr. Grant said, trying hard to speak in a cordial, natural tone. "Come to talk about the claim?"

"That is exactly what I'm here for. Since the very honest inhabitants of St. Julian have given my partner only forty-eight hours in which to get out of town, there is nothing left but to accept your offer. Here is a deed signed by Morey and myself and it is only necessary to pay over the money in order to make the double claim your property."

For a single instant Conestoga Joe was literally bewildered. That the desired transaction should have been brought to a favorable conclusion so soon was more than he had dared to hope for, and the good news deprived him momentarily of the power of speech.

"Have you changed your mind?" Seth asked impatiently.

"Not a bit of it. I've got the stuff here, and it won't take five minutes to settle things," Mr. Grant replied; and just at that moment he remembered that the incendiaries had been away some time; it was already dark and the deed must be prevented now there was no reason for committing it. "Wait a bit while I finish a deal I've been tryin' to make with Bill, unless you're in a big hurry."

"I've got all night before me, so go ahead with your business."

The proprietor of the Palace acted very nervous as he beckoned his partner to follow him out of the room, and when they were at the further end of the saloon where it was impossible for others to hear the conversation, he whispered hurriedly:

"Get over to Seth's house as quick as you know how. The fire musn't be started now when everything is comin' our way, and if you prevent them drunken fools from doin' the job, an eighth of the double claim shall be yours."

"I'll fix it, and mighty glad of the chance," Bill said confidently. "It wasn't the right way to set about the business, and I was afraid of it from the first."

"Don't stop to talk now, for there's no tellin' what may happen."

Then, as Bill started on his errand, Mr. Grant re-entered the office without noting the fact that his messenger had stopped at the bar to refresh himself.

"Now," Conestoga Joe said in a tone of satisfaction as he seated himself at the desk, "we'll soon have our business settled, Seth. How'll you have the money?"

"I suppose it'll have to be gold, though I had rather take something that is easier to carry."

"I can give you half of it in Uncle Sam's notes, and the balance in a draft on Peters of the Junction."

"That will suit me exactly," Seth replied; and ten minutes later the matter was settled.

Seth had placed the money in his belt, and was on the point of taking his departure, having refused Mr. Grant's invitation to "take somethin'," when the report of pistol shots were heard, and one of the party in the saloon shouted: "Fire! I reckon its Seth Hammond's shanty!"

CHAPTER X.

THE DEPARTURE.

WHEN it was finally settled that the double claim should be sold, and Seth had left the house to accept Mr. Grant's proposition, Alice was in high spirits. St. Julian, as a place of residence, had become most disagreeable to her, and she welcomed any change which would remove her from the immediate vicinity of the two hasty wooers.

On the other hand, Ned Morey was depressed. He feared it might not be possible to remain near the woman who had saved his life, and his feelings toward her were decidedly different from gratitude.

"Seth thinks he may go East again," he said, when they were alone.

"If this is a fair specimen of all mining camps, I shall not be sorry," she replied. "Besides, this kind of work isn't suitable for him; he should engage in something less arduous."

"Then you want to leave this section of the country?"

"No indeed; I think the climate glorious, and with different surroundings would like to remain two or three years; but you must confess, Mr. Morey, that St. Julian is not a model town."

"Although my introduction was far from

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and for
the cure of all
scrofulous diseases,
the best
remedy is

Ayer's Sarsaparilla
Cures others, will cure you

being agreeable, I shall always have a certain affection for this camp, for here—"

He ceased speaking very suddenly, for at this moment a bright light appeared at one end of the room, and in the least possible space of time the inflammable building was ablaze.

"Water!" Ned shouted, as he ran into the kitchen; where a small supply was always kept; and Alice followed, ready to do her share toward saving the little home.

The flames were at the rear of the shanty where the cook-stove was connected with the wooden chimney, and neither of the inmates thought it other than an accident such as had been often suggested as probable.

At this portion of the house the wall was composed of thin boards, covered with tarred paper, to shut out the wind and rain, and on such materials the flames fed with amazing rapidity. Before Ned could dash on the second bucketful of water they were licking the ceiling, and the apartment so filled with smoke as to render it imperative for the inmates to seek the open air.

"You go out of doors and I will try to save some of the most valuable things," Ned cried, as he threw open the window.

"I shall do my share," she replied, calmly, taking from its hiding place the nugget, while her companion gathered up an armful of clothing. By the time this slight amount of work had been done, it was dangerous to remain longer within the burning building, and Ned literally forced Alice toward the door.

Mindful only of her safety, he pushed her ahead of him, and as he did so the report of fire-arms was heard, followed by the sharp ping of two bullets, as they struck the casing of the door, hardly an inch from Ned's head. No further explanation was necessary as to the origin of the fire, and understanding that he was the one for whom the shots were intended, he cried:

"Throw yourself on the ground! They will not shoot at you."

At the same instant he emptied the chambers of his revolver in the direction from which the reports had come. Alice had not obeyed the imperative command. Turning suddenly, she placed herself directly in front of Ned, as she said hurriedly:

"If they will not shoot at me, then it will be impossible to bit you."

"My darling! You shall not peril your life for mine." And seizing her by the waist, he would have forced her behind him; but just at that moment was heard another report, and Ned felt the sudden start caused by pain, as a cry of anguish escaped from her lips.

There was no longer any thought in his mind regarding the cowardly murderers, or the flames which were now so near as to be dangerous. He only knew that the one woman on all the earth to him, was wounded, perhaps dying, and lifting her in his arms, he ran swiftly to the stream which flowed past the burning building.

Before he could reach this spot the sharp crack of fire-arms rang out again; but this time from another direction, and the voice of Big Bill was heard shouting:

"You drunken hounds, git out of this, if you want to keep whole skins on your worthless bodies!"

"What's the matter with yer?" some one cried from out the shadow. "Ain't we doin' this 'ere thing jest as was 'greed on?"

Ned paid no attention either to the command or reply. The moisture which he could feel beneath his hand, as well as the palor of the face so near his own, were to him positive proof that the girl he loved so dearly had received her death wound, and the sudden grief nearly deprived him of reason.

Laying the apparently lifeless burden gently on the ground, he kissed the lips that were tightly shut because of pain, until a very decided movement of the head told, as he thought, of returning consciousness.

"My darling, speak to me! Speak, my darling!" he cried frantically; and Alice replied demurely:

"I would have done so before, if it had been possible, for I think the most sensible thing we can do is to stop the flow of blood."

"Why, I thought you were unconscious," he exclaimed, almost as if in reproach because of the unintentional deception.

"The pain and the shock made me very faint for a few seconds," she replied, rising to a sitting posture, "and after that your movements were so rapid and energetic that I was hardly a free agent."

There was a certain tenderness in her voice such as he had never heard before, with no intimation that the caresses had been distasteful, and he was emboldened to repeat them once more before asking:

"Where are you wounded?"

"On the shoulder. I do not think it is serious, except for the blood letting, and that can soon be stopped."

"Is Alice hurt?" a voice, which was trembling with rage, cried; and Seth stood before the lovers.

"Those villains shot her down after setting fire to the house."

A movement of her hand told where the wound was, and with one slash of his knife Seth cut the sleeve from the wrist to the elbow. The blood was flowing freely from the upper portion of the arm; but the steadiness of the stream told that no artery had been severed, and, with a touch as tender as a woman's, Seth bandaged it after the fashion of a compress.

"Thank God it is no worse," he said, fervently, rising to his feet, "and now these scoundrels shall pay for this night's work!"

"Don't Seth, please don't think of taking revenge," Alice cried, in an agony of apprehension. "Remember that you are but one against all these lawless men who, if they can plan such dastardly murder, would stop at nothing."

"There are two of us to make reprisals," Morey said, as he stepped by the side of Seth and began to load his revolver.

"No, no! You must not do more than defend yourselves; in case we should be attacked. Ned, for my sake, do as I ask."

Seth was not so angry but that he understood by these words what had occurred between the two, and turning, he took Morey's hand in his as he said:

"It seems that there has been more than a shooting match and a fire around here."

"It is something which needs your sanction."

"There is no need of that, for—See! the whole town appears to be on fire!"

The little party had had so much with which to occupy their attention that no heed had been paid to anything around them; but now a sinister spectacle met their gaze. The flames, invoked as an assistant to murder, had spread from Seth's home unchecked during the first excitement of the attack, and had now fastened upon the wood and canvas dwellings which were as so much tinder in their path.

The night breeze swept the fire down the one street of the town at a rapid pace, and already was the Palace in the very midst of the conflagration. The miners were working desperately, but their efforts were of little avail. The only water obtainable must be taken from the stream, and the supply of buckets with which to convey it was limited.

"They might as well try to bottle the wind as do that," Seth said, half to himself. "By to-morrow morning Grub-Stake Gulch will be a bed of ashes. Say, Ned, I reckon it would be a good idea to find your horse. It's a case of leaving without very much ceremony, for Alice must be taken to the junction at once, if she is able to ride."

"Will you go, or shall I?" Ned asked. "Of course, one of us must remain here."

"I reckon you'll make the best nurse just now," Seth replied grimly, as he walked toward where the animal had been picketed. When he returned half an hour later, he was leading Ned's horse, and he shouted while yet some distance away:

"I forgot in the excitement all about the nugget. Did you manage to save it?"

"It is here," Ned replied, and added in a whisper, as he raised Alice's hand to his lips, "This is the only nugget to be found in Grub-Stake Gulch, and it is mine."

To Ned and Seth a walk of seventy miles was not a very serious undertaking. Alice declared that she was perfectly able to ride, and her brother insisted that they set out at once.

"It will be easier to travel in the night, and by starting now we should arrive there to-morrow evening. I'll try to pick up something in the way of eatables, while you, Ned, look about for what will answer as a saddle."

"My own is here. I had left it out of doors, and, fortunately, delayed bringing it into the house until it was no longer possible to do so."

An hour later, while the glow of the conflagration yet illumined the surrounding country, the three set out, Alice seated comfortably in the saddle which had been arranged for her special benefit, and Ned walking by her side, as he would have the right to do during the remainder of the journey through life, even to the very brink of the dark river.

It may be only necessary to say that Ned is now the happy possessor of both the nuggets of Grub-Stake Gulch; but yet it will not come amiss if two newspaper clippings are here reproduced. The first is as follows:

Probably the most productive mine in this section of the country is the Sweetheart, owned by Messrs. Hammond & Morey, and none has more of a romance. Mrs. Morey had been wounded, and with her brother and intended husband was on her way to Five-Mile Junction, when the party halted at daybreak because she was too much fatigued to travel further. Mounting the only horse they had, Mr. Hammond rode on ahead, and brought back not only a physician, but a tent and such articles as the invalid might require. In this place, thirty miles from any camp, they remained nearly a week, when it was discovered that they had located on one of the most promising veins either of the gentlemen had ever seen. All the necessary forms of the law were complied with; the vein was christened by the name it now bears, and in less than two months the partners were offered a hundred thousand dollars for a half interest. Mr. Hammond is the active manager, while Mr. Morey divides his time between his beautiful home in Napa valley and the mine, around which a substantial and flourishing town has been built.

The second article does not treat of such a pleasant matter.

Joseph Grant, who died in this town yesterday from the effects of a prolonged debauch, was better known as Conestoga Joe, the founder of St. Julian, a town which sprang up some years ago near what is now known as the Sweetheart mine, and was totally destroyed by fire at the time when it was believed a valuable discovery of gold had been made. Since the conflagration many miners have been there working on grub-stakes; but it is doubtful if anyone ever succeeded in making decent wages.

THE END.

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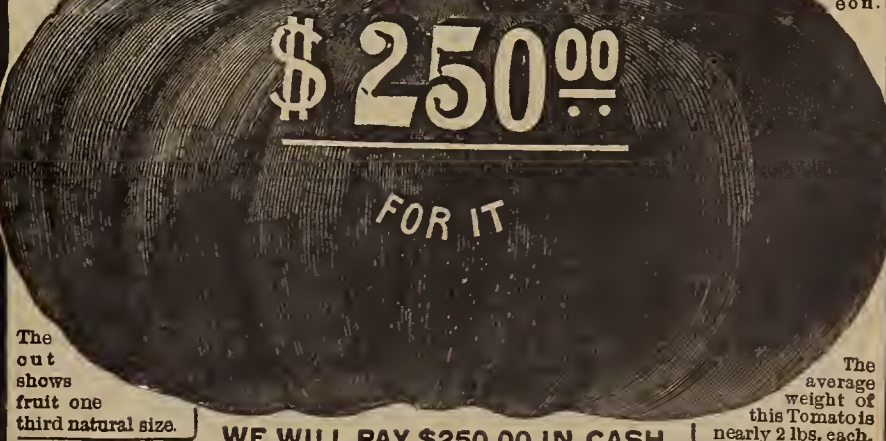
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The average weight of this Tomato is nearly 2 lbs. each.

WE WILL PAY \$250.00 IN CASH

For the best name suggested for this New Tomato. Purchasers are entitled to send in a name for each and every packet they buy. The name can be sent in any time before October 1st, 1891, and will be considered by a disinterested committee of three, who shall award the prize. Full directions for entering the names for competition given on every packet of seed. Price of New Tomato No. "400," 25 cts. per packet, free by mail. With every order for a packet or more, we will also send free our magnificent New Catalogue of "EVERYTHING FOR THE GARDEN" for 1891, (the value alone of which is 25 cts.), on condition that you will state where you saw this advertisement.

PETER HENDERSON & Co. 35 & 37 **CORTLANDT ST. NEW YORK.**

Our Household.

MY LITTLE CUPS.

BY JOSEPHINE HILL.

Six little cups of high degree,
On a tray before me I see;
Buff, purple, pink, white and gold,
And a dainty blue, of exquisite mold.
All of them pretty, bright and gay,
Presenting a most bewitching array.
But as I admire them one and all,
My thoughts wander off at fancy's call,
And memory brings back the face of each
giver,
Who posed as friend, sweetheart or lover.

First, there comes the remembrance of one
Who really loved me; but he is gone.
I was capricious and knew not my heart,
And in anger, at last, I said we must
part.

He went his way, and I went mine;
But oh, I have thought of him many a
time.

Enough of this; and now for sober
James,
Who for wit will ne'er set on fire the
Thames.

We were only good, solid friends, you
know.

Well, what is better on this earth below?

The next on list was a handsome rogue,
Who vowed all the vows that have e'er been
in vogue,

From Adam down to the present age;
But we had a fuss, so he left in a rage,
And soon after married (for spite, I'm sure);
But time long since has effected a cure
For any pain his absence inflicted;
And tho' once so near, far apart we have
drifted;

But the tears shed for him I assure you were
few.

And now I'll tell of the dainty blue.

It is sweet and fair, with its forget-me-nots
blue,

Which seem to say, I'll to you be true;
But I know that he's not, for reasons here
given:

He was a dashing Yale, from the port of New
Haven.

Together, one summer, our time we beguiled
In a little flirtation, I believe it's so styled.
Many sweet things did he say to me,
With a kiss now and then; but that was too
free.

Ah, well! when at last the season did end,
We parted, each feeling the other—a friend.

I'll pass o'er the one to whom I played sister,
And speak of the giver of the dear Royal
Worcester.

Great is his beauty, likewise his devotion,
For he favored my every whim and notion;
Excursions in summer, sleigh-rides in winter,
Roses at Christmas, bouquets on New Year,
While an opera or drama varied the scene,
And my life flowed on in a happy dream.
He was all that was good and noble to me,
A man after my own heart's idea was he.

Yes, six little cups of high degree,
On a tray before me I see;
Some are purple, pink and white,
And taken together, form a pretty sight.
Each little cup has a history bold,
Which I to you did here unfold.
Fancy has now returned with my thoughts,
And I view them only as pretty cups.
Do I weep or pine for the givers gone?
Oh, no, for I married the giver of the last
pretty one.

COMFORTABLE HOUSE DRESSES.

There is nothing so dear to a woman's
heart as a neat and comfortable dress for
the house. Made of becoming color and
suitable material, after a simple pattern,
they lend a witchery to woman that no
other dress does. Never is she so attractive
in the eye of the man who loves her best
as when thus attired, and finished with a
soft, long, white apron.

The first can be either of wool or cotton.
In either case make the skirt unlined, so
as to produce the soft, clinging effect. The

should be so thoroughly cleaned every
fall and spring and all the old dresses still
kept on hand, I never could understand.
One's wardrobe should be quite as thor-
oughly gone over as anything else.
Dresses become ill-smelling by too long
wear, and should be refreshed as well as
anything else.

This is truer of nothing so much as black
dresses. I have sat in public gatherings
behind ladies whose black dresses emitted
the most sickening odors. A lady who



COMFORTABLE HOUSE DRESSES.

perspires freely should renew the waist
to her dress frequently, or have it cleaned
at a dyer's. She may be unconscious of
the odor herself, but rest assured her
friends are not.

Our second model is for evening wear,
made of a very light cream, pink or blue,
with an overdress of a dark, contrasting
color. Around the points it is finished
with a very narrow passementerie braid,
or it could be a gold or silver braid. The
two materials could either be sateen or
cashmere, or two silks.

The third waist is a model to alter a
dress that may be out of style. The
original back could be retained, and the
front can be draped with surah silk of a
contrasting color, over a pleated vest of
white China silk or crepe de Chine. The
surah can go over the old-fashioned coat-
sleeve, forming a puff on the shoulders.

a tablespoonful of powdered sugar, spread-
ing thin over the pudding, and putting it
in a hot oven for about two minutes.

One day I was making this pudding
when I saw about a pint of cold chocolate,
that had been left from the evening before.
I added a pint of milk to it and made my
custard as before. The pudding met with
the approbation of the family, and now I
frequently add a tablespoonful of grated
chocolate or powdered cocoa to the custard,
if I do not happen to have the cold choc-
olate. Bits of cake, cookies, etc., can be
dried in the oven and kept in a tin can
until enough has accumulated for a pud-
ding. It is very easily made, and can be
served either cold or hot; but is much
nicer served cold.

CRANBERRY PIE.—Yesterday I tried an
experiment, and as my pies were pro-
nounced unusually good, I will divulge
the secret. I stewed a quart of
cranberries with a teaspoonful of
sugar and three cupfuls of water.
When they were done, I wet two
tablespoonfuls of corn starch with
a little cold water, stirred it into
the hot cranberries and added a
tablespoonful of butter; then
filled my pies, sprinkled a table-
spoonful of sugar over the top
of each and baked them. This
quantity made two large pies.

THE HOME SIDE OF US.—How
many of us keep the best side out

easiest thing in the world to find fault,
and in no place is there so much of it as in
the home. When everything is in perfect
order, the meals on time and cooked to
suit the taste, not a word is said, although
a little expression of appreciation would
go far toward repaying the busy house-
keeper, whose work and care has brought
all this about; but the moment something
goes wrong criticism is not so carefully
withheld.

A young wife who had only kept house
a few weeks, took great pride in keeping
everything in the neatest order; but one
day, after she had spent much time in
sweeping and dusting, when her husband
came in, he did not notice anything that
she had done, but pointed to a spider's
web in one corner of the ceiling, which
had escaped her notice.

Mothers often fail to appreciate, or at
least to express their appreciation of the
children's help. The little feet may run
here and there on errands and little hands
help in many ways, with never a "thank
you" in return; but if some accident hap-
pens, some mistake is made, something
forgotten, how quickly come the words of
reproof.

Let us try to correct this habit, if it has
been formed, and give to the dear ones at
home the words of praise and apprecia-
tion which we so freely accord to strangers,
and guard our lips from all needless
fault-finding. MAIDA McL.

JUST THIS YEAR.

May those blessings that wait upon duty,
Fall thickly each pathway along;
While visions of sunlight and beauty,
Float up, like some sweet, sacred song.

And may we all strive for perfection;
All try for the space of a year,
To be just a tiny reflection
Of Him whom we each hold so dear.

AMUSEMENTS FOR BOYS.

In a place I once visited there was a
boy about eight years old who, much
of the time, made life a burden to the
rest of us by moving around the house
saying: "Do, do, what shall I do? Do,
do, what shall I do?" He had a little
tune to which he sung it. I don't
know whether it was original with
him; perhaps he had read about some
boy in a book who went around
whining and humming, and grunting
and groaning: "Do, do, what shall I
do?"

"Go and hunt eggs," one of us
would suggest.

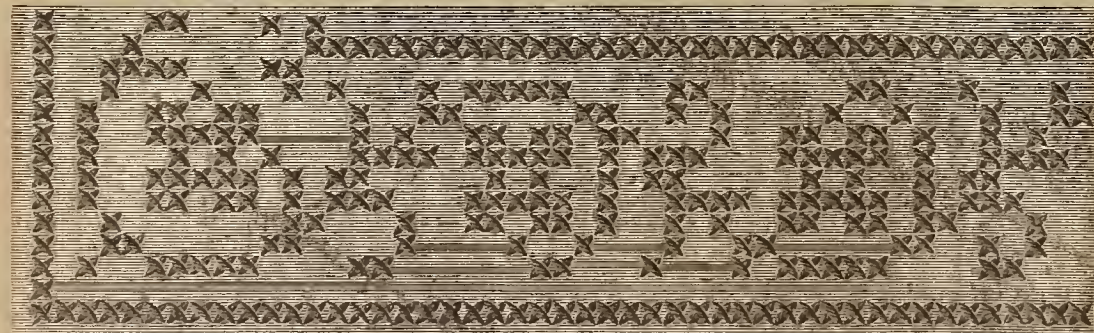
It didn't seem two minutes till he would
be drawing: "Do, do, what shall I do?"

"Go and play with the kittens," would
be the next advice. But very soon it
would be the same old tune, and all we
could contrive would give us only an in-
termission.

There is no doubt there are many boys
who have the same complaint, and what
is worse there are many grown boys who
never really find something to do, and yet
the greatest enjoyment we can feel is in
the accomplishment of a good piece of



WAIST FOR COMFORTABLE HOUSE DRESSES.



CROSS-STITCH FOR GINGHAM.

waist is best fitted of a soft material; can-
ton flannel is good for winter wear and
soft drilling for summer. If the dress is
a cotton one, do not starch it when it is
laundered, as it loses its effect.

They are so simple of construction that,
made in cheap challis of dark colors, they
can be worn a season without laundering,
and then disposed of. Why the house

Buttons finish the lower part of the
sleeve, and can be put on the outer or
inner seam, as preferred. A buckle of
steel is attached to the waist. This could
be made so as to wear with several skirts.
In either model it is the little bows, folds
or finishings that give it the style. None
of these need be expensive.

CHRISTIE IRVING.

at home? If we are visiting a friend,
we are thoughtful of their feelings, and
carefully refrain from finding fault
with anything; we appreciate every
little kindness shown us, and are quick
to express our thanks; but at home
we too often take all the little acts of
kindness as a matter of course and give
no word or sign of appreciation. It is the

work. To point to some useful object
and say: "I did it with my pen, that
is the result of my skill with a chisel,
this picture I created with my pencil, or
this plant I trained from a seed;" these
industries give a true joy.

A very wise man gave this good rule for
work: "Haste not, rest not."

Now, of course, when boys are out of

doors they run and jump and this makes them grow into fine, large, strong men; that is all right and no one wishes to deprive them of this health-giving exercise, no one wishes to call them in to draw pictures or work with tools; but these latter occupations may well be taken up for evening hours and for rainy days which must be spent indoors. But this one thing is certain, if a boy is to enjoy drawing or carving, or work with a scroll-saw, he must be somewhat taught so that he will have reason to be proud of what he produces. If a boy is clever with his pencil, he will find some picture that strikes his fancy and make a copy of it. But he will be better pleased if he arranges a group of articles and makes a picture of his very own, such as he never saw before. And here comes in the application of the rule: "Rest not, haste not." Having once begun to draw, do not pursue the pastime with breathless eagerness for a few days and then stop, but take it more regularly and keep at it for months. Get a good-sized sketch-book and make one sketch every evening. Date each one; it will serve afterward as a record of many things besides the sketches. You will remember something which happened the night you drew the picture of an old hat, and your sketch of a basket will remind you of something else. If there are two or three boys and girls in the family, you can compose yourselves into a sketch club and have no end of fun; and once a week you might invite some of your friends in and have a still better time.

Let us imagine you wish to learn to draw. You can find nothing better to begin with than two books such as are in our "still-life study, No. 1." You wonder what "still-life" means. It is a group of things arranged to be drawn or painted which are not alive but real. For instance, a cluster of grapes, a bouquet of flowers, a curtain, etc. Now, understand, you are not to copy this picture of the books, but you are to take one or two real books and draw their picture. You will notice that in No. 1 the light falls from the left side. You are sure that is true from the way the shadows fall. But wait; perhaps it is too hard for you to begin to draw real things. If you think it will help you, make a copy of this first and then try the real books.

First draw the top of the book which lies flat. The position gives it a very different shape from what you know it really is, but you must make it as it appears to be. It is almost the geometrical figure, called a diamond, in appearance, though you know that really the shape of a book is square or a rectangle. There are several long words here, but some large person can explain them to the boys; and I'm sure the boys think there is nothing more amusing than to learn a new word and what it means. Next draw the back of the book. Notice it does not seem so thick at the end farthest away. You must make it as it seems to be, not as you know it really is. Then draw the top edges of the leaves of the book and make the shadow it casts to the right. The binding casts a shadow on the leaves—notice it.

The small book leaning against the large one is more difficult. I should first draw the most distant edge of it, then the back (I mean where the name of the book is generally printed when I say "the back") and then connect the two. You

say that "lines the same distance apart seem closer together in proportion to their distance from the observer."

Now look at the "still-life study, No. 2." The top of the open book is as wide as the bottom; but see, it seems much more narrow. It is for the same reason that the railroad tracks seem to get nearer together.

If you copy No. 2, draw the open book first, then put the other one under it. All you need is a soft, black lead pencil and a piece of white paper to make half a dozen sketches of books. You can change the position of the books or you can change your own position, and each time you will get a different view. In order to bring out the shading strongly, look at the picture, or at the real books, with eyes half closed. Always let the light fall on your "still-life" from one side.

KATE KAUFFMAN

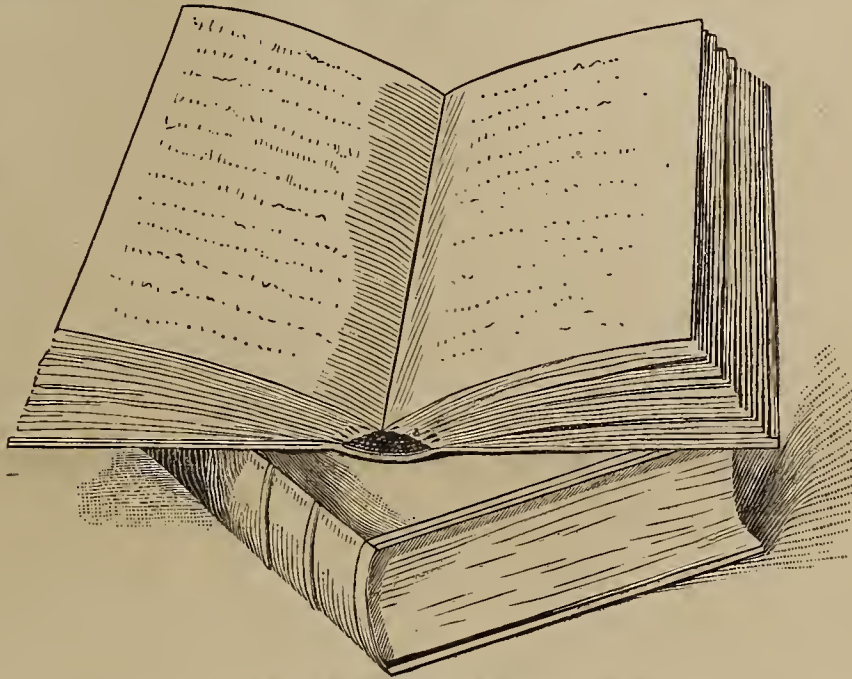
From my heart's mysterious undercurrent
Comes a silver chiming, sweet and low,
And it seems to bring me tender greetings
From the love who loved me long ago.

An enchanted world lies hid forever
Underneath my life's dull ebb and flow,
Only sometimes comes like light from heaven
To my dreams this faint reflected glow.

—Tr. from Wilhelm Muller.

GLEANINGS.

DECORATIVE PLANT.—A plant which is in bloom is sometimes wanted for the dining table or for the place of honor on the center table, and the red clay pot is hardly



No. 2.—POSITION OF BOOKS FOR STILL-LIFE STUDY.

decorative enough for its exalted position. Rip up a couple of old straw hats, first wetting them to prevent the straw from breaking, and sew in a shape which will slip easily over the pot, making no bottom. When finished give it a coat of gold paint, and you have quite an ornamental affair, an improvement on the strip of wadding sometimes used for the same purpose.

PEN-WIPERS.—One of the chief woes of the ready writer, be he clerk or what not, consists in the fact that he no sooner gets a pen into good working order than it, like the "dear gazelle," comes to an untimely end from the corrosion caused by the ink. Life is not long enough to use and mend quills nor to apply with delicate firmness the pen-wiper to a steel one. But some genius has now hit on a solution of the difficulty, which has the merit of the most extreme simplicity. In

pourri mixture has been scattered. Take a piece of bolting cloth, which will show about one inch of the silk on every side, and on it paint very daintily in water-color two or three La France roses; then tack it to the pillow, finishing at one corner with a bow of cream, satin ribbon.

RUBBER WATER BOTTLE.—A rubber water bottle is a very useful article in any family. The water, heated to a boiling point, retains its heat a long time. The bottle being flexible adapts itself to the form of the body, and may be used in the application of moist or dry heat to any part of the body, keeping fomentations warm, and permitting constant change in place without any trouble. A two-quart bottle costs \$1.50 and is a good investment for the money.—Good Housekeeping.

NEVER SHAKE A RUG.—In dusting, do not forget the back of pictures hanging on the wall. A skewer used under the edges of carpets, and a slightly dampened cloth or sponge, will save much dust and labor if occasionally used in place of a broom. Never shake a mat or rug. Remove them to the yard, hang them on a line and beat well; afterward lay them on the grass or clean walk and brush thoroughly with the broom. They will last as long again and look brighter and fresher after this treatment.—Boston Globe.

USE A POSTAGE STAMP.—The value of the postage stamp as a time-saver seems to be unknown to most women. The readiness with which half the women you

know will take upon themselves errands that really require a great deal of time, rather than do the errand by the aid of the post, is amusing. Sometimes it is pathetic. A busy woman with many calls upon her time will go a long way to change a pair of gloves or to return a borrowed handkerchief, when a postage stamp would save her an hour of time. Short letters will take the place of calls in nine cases out of ten, when the calls are merely for small errands. The truth is, there is too great a regard for those small expenses which are, after all, economies with most of the less rich half of creation.—Boston Transcript.

SPLASHER.—A unique splasher is made of three palm-leaf fans, tinted in oil colors according to the coloring of the bed-room. If blue, use three shades of that color, one very deep and dark, one bright, third pale blue. Tie them together in the shape of a large clover leaf under a ribbon bow.

TO COLOR BROWN.

While brown is one of the richest, handsomest colors, and one that is becoming to almost every lady, yet unfortunately it has been difficult to find a brown that would neither fade nor crock.

Three new browns have been added recently to the DIAMOND DYE colors, Fast Brown, Fast Seal Brown and Fast Dark Brown. As the name implies, these dyes give colors that are fast to light and washing. Goods dyed in them are improved by washing in soapsuds.

A PACKAGE of these dyes will color from one to four pounds of silk or wool goods, according to the shade desired. These colors are made from recently discovered dye stuffs (the process of manufacture being patented) and it is impossible for any one besides the manufacturers of Diamond Dyes to make these FAST browns.

many offices, we are informed, a potato is used instead of a pen-wiper. The juicy tuber holds the pen steady, removes at once all ink from the nib and prevents, or at least very greatly delays the process of corrosion, and spares many a well-loved pen to a ripe old age.

ROSE-LEAF PILLOW.—From creamy India silk make a pillow eight inches long by fourteen wide, and fill it with dried rose leaves, through which a little pot-



OUR IMPROVED NOVELTY RUG MACHINE uses two needles, coarse and fine. Machine sent by mail for \$1.10. Terms to agents with price lists of machine, rug patterns, etc., free. To anyone who will act as our agent we will send one machine and a nice Ottoman pattern with yarn to fill it, with full printed directions and a pattern Book, all by mail, for \$1.50. Address, E. ROSS & CO., TOLEDO, OHIO. State where you saw this advertisement.

Waukenhose



It is certain that the stockings are responsible for many foot discomforts and deformities.—Boot and Shoe Recorder.

Waukenhose save discomfort and darning. The toes have room enough; consequently do not push through. The best place for everybody, and the only place for those afflicted with corns, ingrowing nails, or bunions. Made in all qualities; fast black and colors. (Men's only at present.)

If your dealer hasn't them, we will mail a sample pair of Soft Lisle (50c.), or Fine Cotton (35c.), or Medium Cotton (25c.), on receipt of price. (Stamps or postal note.) Mention size shoe worn.

Waukenhose Co., Story Building, Boston, Mass.

PERFECT FITTING DRESSES.

Any Lady Can now Learn to Cut Perfect-Fitting Dresses. No one using a Chart or Square can compete with The McDowell Gown Drafting Machine in Cutting Stylish, Graceful and Perfect-Fitting Garments. Easy to Learn, Rapid to Use, Fits any Form, Follows every Fashion. An invention as Useful as the Sewing Machine. Free 30 days to test at your own home. Send for Illustrated Circular. THE McDOWELL CO., 6 West 14th Street, New York City.

We know the advertisers to be thoroughly reliable, and that their machine is a really wonderful invention.—Editor Ladies World.

Our Journal "La mode de Paris" or "Album des modes," give the Latest Styles and Practical Lessons on DRESSMAKING each month. Send 35 cents for March number explaining Princess Front without centre opening or darts, most useful garment ever invented.

TOKOLOGY, a complete Ladies' Guide in thousands of families, has become a household word. Mrs. N. R. McC. writes: "Dear Dr. Stockham: I shall not attempt to express how thankful I am that you wrote TOKOLOGY. I cannot tell you how much it has done for me. Our son came almost without warning. I most heartily rejoice when I hear of the advent of a 'Tokology Baby.' Bought of agents or direct from us, Prepaid \$2.75. Sample pages free. ALICE B. STOCKHAM & CO., 161 La Salle St., Chicago.

FOR WEAK LUNGS

—USE—

Winchester's Hypophosphite of Lime & Soda.

For Chronic Bronchitis, Nervous Prostration, Dyspepsia or Indigestion, Loss of Vigor and Appetite, and diseases arising from Poverty of the Blood, Winchester's Hypophosphite is a specific, being unequaled as a Vitalizing Tonic, Brain, Nerve and Blood Food.

SOLD BY DRUGGISTS.

WINCHESTER & CO. Chemists

162 William St., N. Y.

YOU CAN GET THIS PAPER ONE YEAR *—FREE—*

We make this liberal offer, as follows: ANY PERSON can have this paper one year free by sending us one NEW yearly subscriber at the regular price, 50 cents a year for the paper alone.

Notice the following conditions: A NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

Accept this offer at once, as we may withdraw it. The offer is good now.

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When any one takes advantage of the above offer, the person securing and sending the new subscriber is not entitled to any other premium or reward except one year's subscription to this paper, but the new subscriber can take any premium offered in connection with the paper, by paying the regular price for the paper, including the premium wanted; for example, the regular price of the Peerless Atlas and one year's subscription to this paper is \$1. The new subscriber can have the paper and the Atlas by paying \$1, and the person that goes out and hunts up the new subscriber can have this paper one year free as a reward for his trouble, but is not entitled to any other premium or reward.

The above offer applies to this paper only, and all subscriptions must be for this paper.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

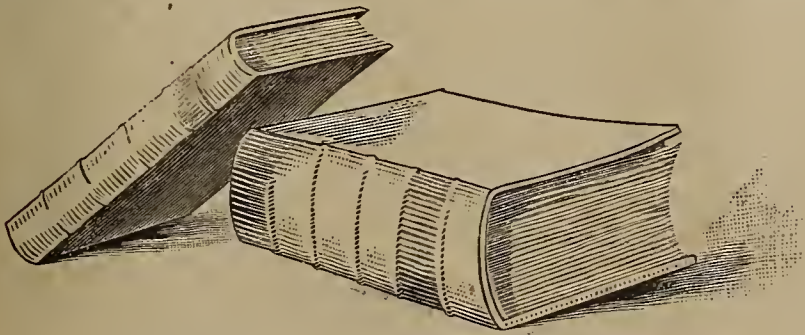
FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Please examine your Address Label, and if YOUR SUBSCRIPTION HAS EXPIRED, or is about to expire, please

RENEW AT ONCE.

Our subscribers will oblige us very much, and save us time and trouble in keeping accounts, if they will be so kind and thoughtful as to renew at least two weeks before their time is out, and thus avoid missing a number. We cannot keep back numbers, because our subscription price is so low that we cannot afford to hunt up back numbers.

The only sure way to avoid missing a number is to renew two weeks before your subscription expires.



No. 1.—POSITION OF BOOKS FOR STILL-LIFE STUDY.

know that really the back of that book and the side where it opens is of the same length; but see, in the picture it doesn't seem so. The side that is farther away looks to be shorter. That is what we call a rule in perspective. You know when you look up the railroad track the rails seem to get closer and closer together as far as you can see, but you know they are really just as far apart as they are where you stand. If you were asked to explain this you can

Our Household.

SWEET PEAS.

We are all admirers of this sweet-scented annual, but many seem to fail in cultivating it. Prepare the ground early, even in March, if there comes a warm spell so that the frost may be out of the ground. Plant the seed quite thick and about an inch in depth. The soil does not need to be so very rich; just good, common garden dirt, enriched with a small amount of thoroughly-rotted manure. Right here is a point I wish amateur flower growers would note and heed. Manure must be old enough to be thoroughly rotted to give most satisfactory results.

The peas should be furnished with support as soon as they are two or three inches high. Wire netting is excellent. If the vines once get tangled on the ground it is difficult to straighten them. They grow slowly at first, and you will think they are not going to amount to anything, and that they were started too early. Have patience. Keep down the weeds and give them "rope." By and by your care will be rewarded, and thousands of blossoms nod you a happy good-morning. Do not allow seed-pods to form if you wish the bloom to be continuous. It is a good plan to plant a few for seed by themselves in some corner of the garden, where they may mature early and not injure the looks of the flower display.

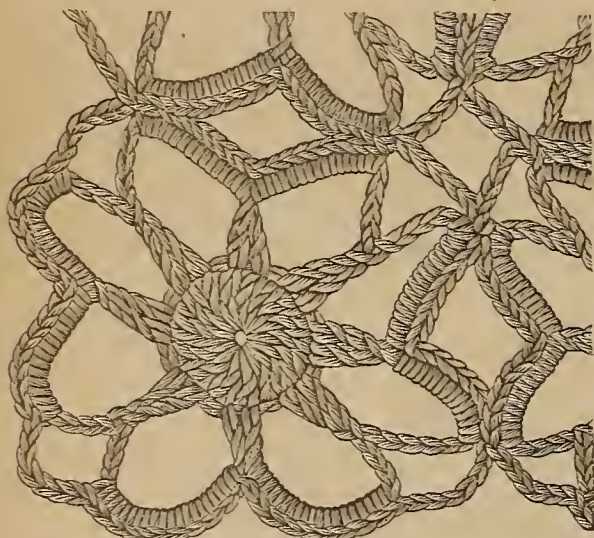
If you make several different plantings, of two weeks between, you will have a succession of bloom all summer. But begin early, or the last planting will probably give you but very few blooms.

Gypsy.

LOVEJOY TIDY, CROCHETED IN SQUARES.

First round—Chain 6, join, chain 3, 15 treble in ring of 6 chain, 16 treble, counting 3 ch; join with short crochet to top of 3 chain.

Second round—Chain 4, 1 treble in first treble of previous round; *chain 10, 1 long treble in next stitch, keeping last over and stitch on needle, 1 treble in next.



LOVEJOY TIDY, CROCHETED IN SQUARES.

Now have four stitches on needle; throw thread over and draw through 3 stitches; thread over and draw through the 2 remaining stitches: repeat from * till you have 8 loops of 10 chains; join to top of first 4 ch.

Third round—* 10 double crochet under first three fourths of 10 chains; chain 7, 10 double crochet under last three fourths of next 10 chains; repeat from * four times; fasten. You now have one square. When making the rest, join them together by two stitches, first and last stitch of chain, and double crochet. ELLA MCGOWEN.

OYSTER SALAD.

Slice or chop very fine, enough white celery to make one pint. Sprinkle bits of ice over it and set away in a cool place. Take one quart of solid oysters, drain the liquor from them and rinse them in a little water; add it to the liquor and boil and skim thoroughly; then put in the oysters and scald, but do not allow them to boil. Then drain them and cut each one in several pieces and pour over them the dressing made as follows: Beat three eggs and add to them one half teacupful of vinegar, two tablespoonfuls of butter, one teaspoonful of made mustard, one half teaspoonful of black pepper, one half teaspoonful of salt. Place the dish containing this in a pan of boiling water and cook until like thick cream, stirring constantly. Do not allow it to boil or it will curdle. Pour this over the oysters, stir lightly and set them away to chill. When

wanted for use, drain the water from the celery, then add the celery to the oysters, toss all up lightly with a fork, place in a salad-dish and garnish with blanched celery tops, and sliced olives if you wish. Nasturtiums with their leaves make a lovely garnish, if one has them growing in their window, which all should do, as they are splendid winter-blooming plants, and of easy culture. H. C.

BAKING-POWDER.

We give the following well-tried recipe for baking-powder, for the lady who requested one:

9 ounces of bi-carbonate of soda,
4 ounces of cream of tartar,
4 ounces of tartaric acid,
10 ounces of wheat flour.

Thoroughly sift this several times; then put away in air-tight boxes or wide-mouthed bottles carefully labelled.

This is from "The Modern Cook Book," published by us, the most complete book of the kind for young housekeepers yet published.

CLIPPED.

TRAINED COOKS.—One of the least crowded and best paid professions for women is that of a trained cook, who, in a most becoming cap and apron, goes out to private houses to prepare company lunches, company breakfasts and dinners. Some with a taste in this direction have still been fearful of undertaking the work, expecting to endanger their social place. But since women of good families and well known social position are venturing to try their good luck, to show their womanly independence and capabilities for business in all sorts of ways, graduates of cooking schools are not afraid to ask for engagements, and to express their willingness to do the work.—*Good Housekeeping.*

AN INVALID'S TABLE-CLOTH.—A napkin is never large enough to protect the bed-clothes, so take heavy linen, the width of the bed and two thirds of a yard deep; hem-stitch and embroider in some appropriate way.—*Good Housekeeping.*

OLD GLOVES.—By no means throw away old kid gloves. Cut off the hands and save the long suede arms of your soiled, worn ball gloves. Use them for polishing silver mirrors, cut glass and jewels. Sew two of the long pieces into irregularly-shaped bags for carrying the pieces of silver toilet set when traveling. It preserves the silver from scratching and tarnishing. Out of old tan or gray gloves you can make charming bags for carrying your opera glasses in. Cut the kid in the same pattern as is used for these silk and velvet bags, line it with China silk, and trace in pen and water colors or silk, your initials on the outside.—*Good Housekeeping.*

RUSSET SHOE.—Before putting away your russet shoes for the winter you will want to restore their old color. How will you do it? Very simply. Just squeeze the juice of a lemon on a bit of soft cloth, give the leather a thorough treatment with this, and see if your shoes don't look as well as they did when you bought them.

RUINED BY FICTION.—There are women today forty years old still living in the pernicious books they read. They started with bad books, in their teens. They followed bad heroines and may, according to their now diseased minds, find themselves an improvement on the creatures they imitate. They are, if not actively vicious, silly, unnatural creatures whom everybody ridicules and no one respects. I know a young woman who has been acting out French novels all her days to the best of her ability, with the result of dressing like a guy when she means to be artistic, acting like a coarse woman when she means to be a siren, and talking absurdities when she means to be enchanting.—*Atlanta Constitution.*



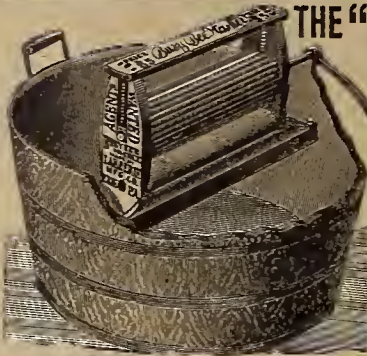
Small little fortunes have been made at work for us, by Anna Page, Austin, Texas, and Jno. Bonn, Toledo, Ohio. See cut. Others are doing as well. Why not you? Some earn over \$500.00 a month. You can do the work and live at home, wherever you are. Even beginners are easily earning from \$5 to \$10 a day. All ages. We show you how and start you. Can work in spare time or all the time. Big money for workers. Failure unknown among them. NEW and wonderful. Particulars free.

H. Hallett & Co., Box 880 Portland, Maine
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NATURE'S SPECIFIC The Wonderful Kola Plant, FOR THE CURE OF ASTHMA FREE ON TRIAL.

Discovered by African Explorers on the banks of the Congo river, West Africa, is a certain and unfailing cure for Every Form of ASTHMA. A Positive Cure Guaranteed, or if you desire it, NO PAY UNTIL CURED. Office for Export and Wholesale Trade, 1164 Broadway, New York. For Descriptive Book and Trial Case of The KOLA Plant Compound, (HIMALAYA), FREE by Mail, address Central Office, KOLA IMPORTING COMPANY, 132 VINE STREET, CINCINNATI, OHIO.

See New York World, May 18, 1890; Philadelphia Press, May 19; Christian Observer and Medical Journal, April 9; etc., for full accounts of this wonderful botanical discovery. The Christian Evangelist, May 30, 1890, says editorially: "If no other result than the discovery of the Kola plant followed the explorations of Stanley and associates, surely their labors were not in vain. We have the most convincing proof that it is a certain and unfailing cure for Asthma in all its forms, and is the most valuable medical discovery of this century." Remember, NO PAY UNTIL CURED.



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Guaranteed to run easier and do better work than any other in the world. No rubbing necessary. We challenge a trial with any other machine. Warranted for five years, and money refunded if not entirely satisfactory. Fits any tub. Saves time, money and clothes. Just the machine for ladies who are not very strong. Thousands of ladies who used to hire their washing done now save that expense by using the "BUSY BEE" WASHER. Save your strength, health, time, clothes and money by investing only \$2 in this machine. Don't keep the Washer unless it suits you. We are responsible and mean just what we say. We invite you to investigate thoroughly before risking a cent. We will forfeit \$100 to anyone who will prove that we ever refused to refund the full amount to a dissatisfied purchaser.

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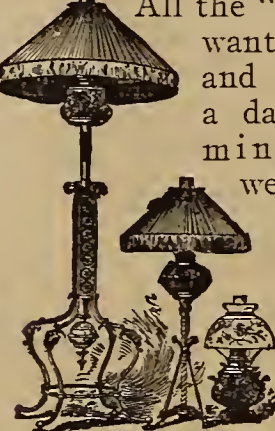
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If any reader of this advertisement has a small picture, tintype or photo, of some loved one we will enlarge it for framing, absolutely free of cost. We have invented a new way of enlarging pictures by the aid of electricity and make this offer to our work everywhere. We can make any change in style of dress that may be desired, and guarantee a satisfactory picture, otherwise we could not afford to make this offer. If you have any valued picture let us make you, free of cost, a large copy that will be cherished. AGENTS, send us your own picture and get sample portrait free for canvassing. Send pictures by mail, being careful to write name and address on back of same. Small pictures returned unharmed. Send at once as this offer will not be repeated. Address WORLD MANUFACTURING COMPANY, 122 NASSAU STREET, NEW YORK.

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No other central-draft lamp is so easy to care for; the others are very difficult.

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A process of producing AERATED Oxygen or oxygen highly ozonized at a NOMINAL COST. This is the FIRST STEP FORWARD IN TWENTY-FIVE YEARS. It is a source of universal satisfaction among physicians and invalids that SCIENCE has at last come to their relief and produced a LIQUID OXYGEN for the HOME treatment of all diseases by inhalation that can be sold for ONE-THIRD the PRICE of any so-called oxygen on the market.

The only oxygen treatment indorsed by the entire medical faculty.

We send FREE our book of WONDERFUL CURES to any address.

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Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

DONALD KENNEDY Of Roxbury, Mass., says

My Medical Discovery seldom takes hold of two people alike! Why? Because no two people have the same weak spot. Beginning at the stomach it goes searching through the body for any hidden humor. Nine times out of ten, inward humor makes the weak spot. Perhaps its only a little sediment left on a nerve or in a gland; the Medical Discovery slides it right along, and you find quick happiness from the first bottle. Perhaps its a big sediment or open sore, well settled somewhere, ready to fight. The Medical Discovery begins the fight, and you think it pretty hard, but soon you thank me for making something that has reached your weak spot. Write me if you want to know more about it.

14K GOLD! AND SOLID GERMAN SILVER.

The cases are made of a plate of fine 14k gold over the finest quality of German silver, making a case composed of nothing but gold covering finest quality of German silver. With German silver on the inside and 14k gold on the outside, we warrant the cases to be equal in appearance to a \$50 solid 14k gold watch. They are open face, smooth basins, finished to dazzling brightness, dust and damp proof and warranted to wear a life time. Different from the cheap brass watches offered, the case contains nothing but gold and the finest quality of German silver, and in fact is every way except intrinsic value equal to a \$50 solid gold watch. The movement is a fine 3-4 plate style, finely jeweled polished plion, oil tempered main spring which does not break, and all the latest improvements. Guaranteed in sent with each watch that it will keep accurate time for 2 years ordinary use. OUR 90 DAY OFFER. That all may have this beautiful watch in their own hands, and fully examine end see for themselves the value and running qualities of same, we will send it C. O. D. to your express office, with the privilege to examine it. All we ask is any business man in your city as reference that you are ordering the watch in good faith, and if found satisfactory you can pay the express agent \$2.98, or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowing the fine qualities of this watch we make the above offer, as anyone wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address WILLIAMS & CO., 125 S. Halstead St., Chicago, Illinois. Mention this paper when you write.

you are ordering the watch in good faith, and if found satisfactory you can pay the express agent \$2.98, or when full amount is sent with order we give a fine gold plated chain and charm free. If not satisfactory you can refuse same and you are nothing out but your time in going to the express office. Knowing the fine qualities of this watch we make the above offer, as anyone wanting a good time piece will accept same at once on examination. Order at once as our price will be advanced. Address WILLIAMS & CO., 125 S. Halstead St., Chicago, Illinois. Mention this paper when you write.

EASY WORK FOR LADIES

Some ladies might call this easy work mere fun. We consider it the Druggery of Life. Our lady agents are making from \$25. to \$50. a day. We offer all ladies employment, more respectable, profitable and lighter than peddling or canvassing for periodicals, books or chronos. WILL YOU ALWAYS DO LIFE'S DRUGGERY? Come with us and secure a snug Fortune. We wish to Give Every Lady a String of Pearls Free, and will positively send our Great Treasure Packet containing all. Worth its weight in Gold, with full particulars to all married or single women, putting them on the track of easy, profitable employment for 6c. in stamps to help pay postage etc. Hundreds of kind letters are pouring in upon us every day from our lady friends. You too will be delighted. Why not write at once. Send 6c. to day. Address Great Spanish Medical Co. Augusta, Maine.

PRINTING OUTFIT. A WHOLE PRINTING OUTFIT, COMPLETE, PRACTICAL & PERFECT. Just as shown in cut. 3 Alphabets of neat type. Books of tools, etc. Pad, Trencher, a neat case with catalogue and directions. HOW TO BE A PRINTER. Sets up any name, prints cards, paper, envelopes, etc., marks lines. Worth \$7.98. Beware of cheap COUNTERFEITS. Postpaid only 25c., 3, 6, 6c. for \$1.40. Agents wanted. INGERSON & BRO., 65 BORTLAND ST. N. Y. CITY. Don't fail to mention this paper.

Our Sunday Afternoon.

WHAT SHALL IT PROFIT?

If I lay waste and wither up with doubt
The blessed fields of heaven where once
my faith
Possessed itself serenely safe from death;
If I deny the things past finding out;
Or if I orphan my own soul of One
That seemed a Father, and make void the place
Within me, where he dwelt in power and
grace,
What do I gain, that am myself undone?
—William Dean Howells, in *Harper's Magazine*

NOT GOOD ENOUGH.

NOTHING is good enough that is not as good as it can be. The verdict "good enough," says a well known writer, which in boyhood passes the defective task, will become "bad enough" when the habit of inaccuracy has spread itself over the life.

"You have planed that board well, have you, Frank?" asked the carpenter of an apprentice.

"Oh, it will do," replied the boy. "It don't need to be very well planed for the use to be made of it. Nobody will see it."

"It will not do if it is not planed as neatly and as smoothly as possible," replied the carpenter, who had the reputation of being the best and most conscientious workman in the city.

"I suppose I could make it smoother," said the boy.

"Then do it. 'Good enough' has but one meaning in my shop, and that is 'perfect.' If a thing is not perfect, it is not good enough for me."

"You haven't made things look very neat and orderly here in the back of the store," said a merchant to a young clerk.

"Well, I thought it was good enough for back there where the things cannot be seen very plainly, and where customers seldom go."

"That won't do," said the merchant sharply, and then added, in a kinder tone: "You must get ideas of that kind out of your head, my boy, if you hope to succeed in life. That kind of 'good enough' isn't much better than 'bad enough.'"

The girls who do not sweep in the corners or dust under things, and the boys who dispose of tasks as speedily as possible, declaring that things will "do" if they are not well done, are the boys and girls who are very likely to make failures in life,

because the habit of inaccuracy has become a part of their characters.

The old adage, "What is worth doing at all is worth doing well," is as true as it was when first spoken, and it will always be true.—*Youth's Companion*.

RULING THE TONGUE.

Do not talk too much. Learn how to be silent. There is nothing like the man or woman that can keep the mouth shut. Not that people should always keep the tongue still; it is made for use; but there are times when silence is the best and most effective reply. When a boor speaks roughly or uncivilly to you, when you are asked an impertinent question, when a sneer is conveyed under cover of an inquiry for information, or when, having appealed to you on a question of taste, your opinion is met with ridicule, the best answer in these or like exigencies is masterful silence, bespeaking reserve power, conscious strength, dignity, self-command; and nothing at times is so effective as the silence which springs from contempt. He who can endure reproach silently, and can keep silent under trying circumstances, is a man of no common character. He who is irritated, and who loses control of tongue and temper, is at the mercy of his opponent. He who can keep calm and cool, can mold men as he will. The cold hammer bends the hot iron. "If any man offend not in word, the same is a perfect man, and able also to bridle the whole body." James iii. 2.

LOOK TOWARDS THE LIGHT.

A weary and discouraged woman, after struggling all day with contrary winds and tides, came to her home, and flinging herself into a chair, said:

"Everything looks dark, dark."

"Why don't you turn your face to the light, aunty dear?" said a little niece who was standing near.

The words were a message from on high, and the weary eyes were turned towards Him who is the light and the life of men, and in whose light alone we see light.

"Turn your face to the light," oh weary watcher; you have looked and longed and struggled in the darkness without avail; now turn your glance the other way! "God, who commanded the light to shine out of darkness, hath shined in our hearts, to give unto us the light of the knowledge of the glory of God in the face of Jesus Christ," and if we will look towards the light, and walk in the light,

Catarrh Cured.

If you suffer from Catarrh, in any of its forms, it is your duty to yourself and family to obtain the means of a certain cure before it is too late. This you can easily do by sending a self-addressed stamped envelope to Prof. J. A. Lawrence, New York, who will send you FREE, by return mail, a copy of the original recipe for preparing the best and surest remedy ever discovered for the cure of Catarrh in all its various stages. Over one million cases of this dreadful, disgusting, and often-times fatal disease have been cured permanently during the past five years by the use of this medicine. Write to-day for this FREE recipe. Its timely use may save you from the death toils of Consumption. Do not delay longer, if you desire a speedy and permanent cure. Address Prof. J. A. LAWRENCE, 88 Warren Street, New York.

LOOK 40,000 READ WATCHES MUST BE SOLD!

Lot No. 3. Gents' Solid Gold Waltham, full jeweled, full engraved, stem wind. Only.....\$21.25
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Don't buy worthless brass goods from other houses when you can buy solid gold goods from us at less than half price. Every Watch is guaranteed. The Gold Watches are guaranteed for 25 years. Don't send any money until you see these goods, which will be shipped C. O. D. You can test them and examine at Express Office, and if they suit you, pay the Express Company, otherwise you pay nothing. If you are far from Express Office, send money with order, and we will ship free of charge.

THE CHICAGO WATCH CO.
142 Dearborn Street,
Capital Stock, \$130,000. CHICAGO.

300 VARIETIES OF FLOWER SEEDS.

The largest and finest collection of flower seeds ever offered. These seeds are fresh and reliable. Among them: German Pansies, Petunias, Sweet Peas, Asters, Japanese Pinks, Mignonette, Phlox, Balsam, Zinnias, Candytuft, Sweet Alyssum, Poppy, Godetia, Nasturtium, Verbena, Chrysanthemum, Marigold, Stocks, Portulacca, Amaranth, Gaillardia, Larkspur, Cockscomb, etc. This magnificent collection sent post-paid, to any one who will send us seven two-cent stamps for a 3 months' new trial subscription to THE HOUSEKEEPER (regular price, \$1.00 per year). THE HOUSEKEEPER is issued twice each month and contains from 16 to 24 pages of the best reading matter from the leading lady writers. It is well edited, printed on good paper. Write for agent's terms, and our premium list. We have 600,000 readers. Does this not speak well for our paper? Remember, we will send THE HOUSEKEEPER for 3 months and a package of seeds taken from 300 varieties, all post-paid, for only 14 cts. If you are not pleased with them, let us know and we will refund your money. THE HOUSEKEEPER, Minneapolis, Minn.

we shall find blessing and peace all along our way, and even amid darkness and shadows shall rejoice in the hope of the glory of God, the light of an unsetting day.—H. L. H., in *Bible Standard*.

A SMILE.

Who can tell the value of a smile? It costs the giver nothing, but is beyond price to the erring and unrelenting, the sad and cheerless, the lost and forsaken. It disarms malice, subdues temper, and turns hatred to love, revenge to kindness, and paves the darkest path with gems of sunlight. A smile on the brow betrays a kind heart, a pleasant friend, an affectionate brother, a dutiful son and a happy husband. It adds a charm to beauty, decorates the face of the deformed, and makes a lovely woman resemble an angel in paradise.

VALUE OF A CHRISTIAN CONSCIENCE.

Every Christian father or mother who has ever heard the click of the latch (that cruel pistol shot aimed at the heart), as it springs for the last time behind son or daughter going forth into the world, knows that the most blessed balm for the wounded heart is the assurance that the

loved one carries the surest antidote against moral poison, that safeguard against moral contagion—a Christian conscience. Yet how many are left with the bitter thought that they have neglected to inculcate this principle. But you fathers and mothers who yet have your little ones about you, see to it, before the heartaches come, which shall start a hitherto unopened fountain of tears, that those tears are robbed of this bitterness.—*Christian at Work*.

READING THE BIBLE.

It is one thing to eulogize the Bible. It is another thing to give it careful and daily reading and meditation. The magazine and the newspaper are anxiously looked for, and hours are given to their perusal. The Bible may be read daily, but the reading may be simply to ease one's conscience and without any thought of its divine authority and health-giving tendency to the soul. Henry Martyn, the missionary, would never allow himself to read a book one moment after he felt that it was gaining a preference in his mind over the Bible. As long as he could turn to his Bible with a supreme relish, he would continue reading, and no longer. How few would think of establishing such a criterion in literature.—*Christian Inquirer*.

A State Of Siege

How many people there are who regard the coming of

winter as a constant state of siege. It seems as if the elements sat down outside the walls of health and now and again, led by the north wind and his attendant blasts, broke over the ramparts, spreading colds, pneumonia and death. Who knows when the next storm may come and what its effects upon your constitution may be? The fortifications of health must be made strong. **SCOTT'S EMULSION** of pure Norwegian Cod Liver Oil and Hypophosphites of Lime and Soda will aid you to hold out against Coughs, Colds, Consumption, Scrofula, General Debility, and all Anæmic and Wasting Diseases, until the siege is raised. *It prevents wasting in children.* Palatable as Milk.

SPECIAL.—Scott's Emulsion is non-secret, and is prescribed by the Medical Profession all over the world, because its ingredients are scientifically combined in such a manner as to greatly increase their remedial value.

CAUTION.—Scott's Emulsion is put up in salmon-colored wrappers. Be sure and get the genuine. Prepared only by Scott & Bowne, Manufacturing Chemists, New York. All Druggists.



Gleanings.

COMMON SENSE WEAR.

Brill means the most sensible thing for women's wear since the advent of shorter and lighter petticoats, is the leather leggings that are to be had—not for the asking, but for the ordering—for they are made only to order, and for a five-dollar bill besides. These are exactly such leather leggings as little boys wear, only they are made of softer and more pliable leather, the nicest kind being of glove kid. They may be worn over low shoes or street boots, and they give the legs just the proper protection against cold and damp. For, nonsense aside, the legs of women from the knee down to the boot tops are most inadequately clad.

Think of the inconsistency of it for a moment. A woman wraps the upper part of her body in garment after garment, and for out-door wear puts a fur garment on top of these. Her petticoats keep her warm to the knees, and her shoes, if they are of any adequate thickness whatever, protect her feet. But from the knee downward there is often but a single web of silk or wool, or at the most one of each. Not only is this insufficient, but its insufficiency is helped out by the disproportion between this covering and that of the rest of the body. With no end of cloth and fur to keep the upper body in a perspiration, what is to be expected but a chill that nothing but heaven itself can keep from inducing pneumonia or bronchitis?

TO KEEP THE HAIR BRIGHT.

To keep the hair bright, healthy and to preserve its color, abstain from the use of all minerals, even soda, in washing it. Use only warm water and pure castile soap; cleanse the scalp thoroughly with a brush, and wash the hair strand by strand. After rubbing well with a towel, dry it by piece between the warm palms, and this method will coerce any threads of latent gold into shining. Clip the ends once a month. Brush it carefully morning and night. Avoid liquid extracts and perfumes, as they make the hair coarse and brittle. The following is a good way to obtain a delicate perfume:

Make a mob cap of silk, and between the thin lining lay layers of flat cotton filled with satchet powder. After brushing the hair, shake it out and push it loosely under the cap for half an hour every night and morning. A deliciously-vague, faintly-penetrating perfume is captured in this way.—*Philadelphia Record*.

Recent Publications.

CATALOGUES RECEIVED.

Illustrated descriptive catalogue of the Improved Excelsior Incubator and Brooder, and other useful appliances of the modern poultry yard. George H. Stahl, Quincy, Ill.

Catalogue of select roses. Ellwanger & Barry, Rochester, N. Y.

Seed Potatoes. L. L. Olds, Clinton, Wis.

Pomona Nurseries. Fruits and plants. William Parry, Parry, N. J.

Choice flower seed, bulbs, plants, etc. Lockwood Myrick, Northboro, Mass.

Seed annual for 1891. Garden, field and flower seed, complete line. D. M. Ferry, Detroit, Mich.

Seed potatoes. Theron E. Platt, Newtown, Conn.

Trees, plants, shrubs, roses, bulbs, etc. Bloomington Phoenix Nurseries, Bloomington, Ill.

Stillwater Valley Nursery. Warren Hartle, Covington, Ohio.

Fruit trees, plants and vines. Excelsior Sprayer and Spraying Pumps. William Stahl, Quincy, Ill.

Grape vines, small fruits and seeds. Joel Horner & Son, Delair, N. J.

Oakland Nurseries, Forgy, Ohio.

"The whole story of the garden, lawn and farm." Spring catalogue. Vaughan's Seed Store, Chicago, Ill.

Garden, field and flower seed. Franklin Ely, Doylestown, Pa.

Catalogue of the new Acme pulverizing harrow, clod crusher and leveller. Duane H. Nash, Millington, N. J.

Bee-keeping in Dixie, and price list of apianary supplies. Jenkins & Parker, Wetumka, Ala.

Descriptive circular of "Osgood" scales. Every farmer who believes that farming should be conducted on business principles should read what this catalogue says about farm scales. Osgood & Thompson, Binghamton, N. Y.

Catalogue of plants, trees, graded and tested seeds. Michigan Seed Co., South Haven, Mich.

We act liberally and honorably with afflicted persons and prove to their satisfaction that they have NOT TRIED ELECTRICITY AS A CURATIVE UNTIL THEY HAVE WORN THE PULVERMACHER ELECTRIC BELT.

This involves proving as well that all other belts and appliances are either colorable imitations or are entirely non-electric.

We undertake to do these things, and we cannot afford to make any misrepresentations.

This is in conformity with our business policy as PIONEERS in the manufacture of electric body-wear—larger manufacturers and dealers than all other concerns combined.

APPLY for PARTICULARS.

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172 and 174 Race St., Cincinnati, Ohio.

Preserve the above "order for sample" or apply NOW, while you have our address before you, as this offer appears in the papers only occasionally. Please mention the FARM AND FIRESIDE.


HENCH'S CULTIVATORS
RIDING or WALKING STEEL
With Double Row Corn Planter and Fertilizer complete in one machine. Crowned with Medals since 1879.
KING of the CORN FIELD
Thousands in use giving entire satisfaction.
Agents wanted. Catalogues free. Name this paper.
HENCH & DRONGOLD,
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BEEES AND HONEY
The Doretted Strongest, Best and Cheapest BEE-HIVE for all purposes. Please everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Gleanings in Bee Culture** (a \$1 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies**. Our **A. B. C. of Bee Culture** is a cyclopedia of 400 pp., 6x10, and 300 cts. Price in cloth \$1.25. Mention this paper.
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Barnes' Foot Power Machinery.
WORKERS OF WOOD OR METAL, without steam power, using outfits of these Machines, can bid lower, and save more money from their jobs, than by any other means for doing their work. Also for Industrial Schools or Home Training. With them boys can acquire journeymen's trades before they "go for themselves." Price-List Free.
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A SOLID STEEL FENCE.
MADE OF EXPANDED METAL.
For RESIDENCES, CHURCHES, CEMETERIES, FARMS GARDENS, Gates, Arbors, Window Guards, Trellises.
Write for Illustrated Catalogue. No. 18. **CENTRAL EXPANDED METAL CO.**
Hardware Men keep it. Give name of this paper.
116 Water St., Pittsburgh, Pa.
Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.



\$20 HIGH PHILA. SINGER
Automatic Bobbin Winder. 15 Days' Trial. Warranted 5 years. Self-setting needle, self-threading shuttle. Light-running and noiseless. All attachments. Send **THE C. A. WOOD CO.,** for free 17 N. 10th St., Phila., Pa. circular.
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10 CENTS (silver) pays for your address in the "AGENT'S DIRECTORY," which goes whirling all over the United States, and you will get hundreds of samples, circulars, books, newspapers, magazines, etc., from those who want agents. You will get lots of good reading free and will be **WELL PLEASED** with the small investment. List containing name sent to each person answering.
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CURES ALL NERVOUS, PAINFUL AND WEAKENING DISEASES,

NERVOUS AND GENERAL DEBILITY, PHYSICAL WEAKNESS, EXHAUSTION, ALL NERVOUS COMPLAINTS, DYSPEPSIA, NEURALGIA, RHEUMATISM, FEMALE AILMENTS, STOMACH, LIVER AND KIDNEY DISORDERS, &c., &c.

PULVERMACHER'S ELECTRIC BELT WILL LAST FOR YEARS—SAVING MUCH SUFFERING, WORRY, TIME AND MONEY.

INTRODUCED IN ENGLAND, FRANCE AND GERMANY IN 1843; IN THE UNITED STATES IN 1876.

ENDORSEMENTS AND REPUTATION WORLD WIDE.

THIRTY-ONE AMERICAN AND FOREIGN PATENTS HAVE BEEN GRANTED, INCLUDING ALL LATE IMPROVEMENTS.

YOU TAKE NO RISK. WE DO BUSINESS IN THE GOOD OLD-FASHIONED WAY.

IT IS TO THE INTEREST OF SICK, WEAK, OR AILING PERSONS TO WRITE US.
WE CAN BE OF SERVICE TO THEM

Read the following Unexampled Offer:

SAMPLE OF BELT SENT FREE.

We take pleasure in sending by mail to afflicted persons who may be interested in our electric treatment, for home use, a FREE sample of the Pulvermacher Electric Belt for examination. This sample enables patients to judge for themselves of its genuine electric character, and to see at a glance that it is different in every particular of construction, and in the materials used, from any of the so-called Curative Appliances which may have been brought to their notice.

They can further understand from the intricate and scientific arrangement of the metals and absorbents that complicated and costly machinery (which we alone have the right to use) is necessary in its manufacture, thereby precluding any possibility of imitating or infringing it.

We are the only manufacturers of genuine Electric-Curative Appliances, and WE ALONE send samples for examination. The concerns which advertise belts and other appliances in competition with ours DO NOT submit samples in advance of purchase, as they are aware that even a novice in electricity would condemn their bogus contrivances AT SIGHT as worthless. The sample we propose to send is a perfect, full size, fac-simile section, including negative pole of the Pulvermacher Electric Belt, and corresponds precisely with our descriptions and representations.

WE DO JUST AS WE SAY.

The afflicted have been imposed upon to such an alarming extent by dealers in all sorts of so-called electric, magnetic and voltaic belts and other appliances that it gives us pleasure to state that our plan of sending samples (which other dealers WILL NOT DO), has been the means of forestalling further imposition upon afflicted persons by SATISFYING THEM BEYOND QUESTION that the Pulvermacher Electric Belt is the ONE and ONLY BELT suitable in every way for practical medical purposes.

The sample of Belt is sent by return mail, secure from observation, to every ailing person on receipt of "Order for Sample" form below. It may also be had on application or on request by letter.

[Samples can be returned, without any cost, in same box in which they are received. We furnish, in every case, a postpaid, printed addressed wrapper for the purpose.]

ORDER FOR SAMPLE.

[ENCLOSE THIS ORDER WITH NAME AND ADDRESS IN FULL.]

Pulvermacher Galvanic Co., 172 and 174 Race street, Cincinnati, Ohio.

Send me by mail, without charge, a sample of the Pulvermacher Electric Belt, as proposed by you.

Name.....
Town.....County.....State.....

WITH THE **SAMPLE** WE MAIL A COPY OF "**THE ELECTRIC REVIEW**" AND OUR "**GENERAL PAMPHLET**" OF 112 PAGES, CONTAINING FULL PARTICULARS OF THESE NOTED CURATIVE APPLIANCES, FOR ALL OF WHICH YOU ARE NOT CHARGED ANYTHING.

FOSTER

\$45.²⁵ BUGGIES \$70.⁰⁰ PHAETONS

\$5.⁶⁵ HARNESS \$11.⁰⁰ ROAD CART

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THE FOSTER BUGGY & CART CO. 32 Pike Bldg. CINCINNATI, O.

Our Miscellany.

THE sun yields 8,000,000 times the light of the moon.

THE population of the earth doubles itself in 250 years.

BEECHAM'S PILLS act like magic on a Weak Stomach.

THE word "its" occurs only once in the whole of the Bible.

THREE female physicians are doing a thriving business in Adrian, Mich.

MORE than 200,000 people are confirmed in the English church every year.

THE total cost of railroads in the United States has been nine billion dollars.

IN Bulgaria only seven and a half per cent of the population can read and write.

SIXTY voyages around Cape Horn have been made by Captain Holmes, of Mystic, Conn.

AN immense quarry of lithograph stone has been discovered about 100 miles from San Antonio.

THE one part of the world in which no native pipes and no native smokers have been found is Australia.

IN 1836 only 109 patents were issued in the United States; in 1889, 32,600, the largest number ever known.

SIX THOUSAND different species of birds are known, and of these Europe possesses 503 and North America 471.

PITTSBURGH claims to have more millionaires in proportion to her population than any other city in the world.

THE present output of white lead in the United States is estimated at 70,000 tons, and of linseed oil 25,000,000 gallons.

An Education Without Cost, for Boys and Girls. Write the American Farmer, 125 Clark Street, Chicago, Ill. Mention this paper.

THE silver product of the United States, which was \$100,000 in 1859, has risen to an average of \$55,000,000 in the last five years.

ALASKA cost only \$7,000,000, and the revenue to the national treasury is expected to amount to \$3,000,000 a year for the next twenty years.

URANIUM is now classed among the rare metals; on account of its electrical resistance it is likely to be used in electrical insulation.

THE national debt of Germany, which is much smaller than that of any other great country in the world, is, in round figures, \$192,000,000.

A GEORGIA postmaster is in trouble. Through a hole in the roof of his office the rain poured in one night and stuck together two hundred dollars' worth of postage stamps.

For troublesome weeds and for grass in sidewalks, driveways, etc., apply a dressing of coarse salt; this will kill the growth. Be careful not to put it on anything that should not be destroyed, however.

We will mail free to any address a copy of our Home Treatment, a positive cure for all complaints, and weaknesses peculiar to females. Send self-addressed stamped envelope. Mayflower Med. Co., 85 LaSalle St., Chicago, Ill.

OF the entire race, 500,000,000 are well clothed—that is, they wear garments of some kind to cover nakedness; 250,000,000 habitually go naked, and 700,000,000 only cover the middle parts of the body; 500,000,000 live in houses, 700,000,000 in huts and caves, and 250,000,000 virtually have no place to lay their heads.

AN UGLY COUGH, even when it appears deep-seated, can be alleviated, if not immediately removed by Dr. D. Jayne's Expectorant, a popular and long-established remedy for Bronchial and Asthmatic Affections, and for fifty years an approved helper for all Lung Complaints.

THE embalming art dates back to 4,000, or thereabouts. B. C. It was a religious rite, therefore practiced by both rich and poor, and costing from about \$500 to \$2,000, and in case of rich people to a much higher figure. Fifteen million dollars is the figure put by Rawlinson as the yearly expense to the Egyptians of embalming their dead.

For catarrh stuff up considerable salt and water from the hollow of the hand every morning. Salt and water, used as a gargle just before going to bed, strengthens the throat and helps to prevent bronchial troubles; it is also excellent for sore throat.

If anything catches fire, or something burning makes a disagreeable smell or smoke, throw salt upon it at once. If a bright, clear fire is quickly desired, it may readily be obtained by throwing salt upon the coals; likewise, if too much blaze should result from dripping of fat from broiling steak, ham, etc., salt will subdue it.—Good Housekeeping.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 220 Powers' Block, Rochester, N. Y.

Two wealthy Jews, of Bagdad, now own all that remains of the ancient town of Babylon.

THE Chinese are said to produce a remarkable anesthetic by placing a frog in a jar of flour and irritating it by prodding it, when the creature exudes a liquid which forms a paste with the flour. This paste, dissolved in water, has well-marked anesthetic properties. After the finger has been immersed in the liquid for a few minutes it can be cut to the bone without any pain being felt.

To the question, "Who invented spectacles?" an answer has been given by the Italians in favor of one of themselves. In Florence, in a little street, a memorial tablet has been inserted in the facade of one of the houses, and bears the following inscription: "To honor the memory of Salvino degli Armati, inventor of spectacles in the thirteenth century, the Guild of Artisans, on the spot once occupied by the houses of the Armati, placed this tablet."

THE domestic laboratory in Mr. Dwight L. Moody's seminary at Northfield, which was the subject of an illustrated article in *Bazar* No. 7 of the current volume, was organized by Miss Huntington, of the Wilson Mission Kitchen-Garden in New York, and is carried on by teachers of her training. One hundred girls are here taught housewifery, sewing, cooking, washing, table-waiting and fine laundry-work as exact sciences, and not as make-shift employments. Mr. Moody's seminary was founded for pupils having high aims but small means, who may by its means obtain a thorough education at the lowest cost, with the tacit understanding that every graduate, both of its academic and domestic science courses, will be moved to teach what she has learned, either privately or professionally.

GOOD WORDS.

BROOKLYN, N. Y., Jan. 26, 1891.

The Cook Book, with one number of your paper, was received. I think your paper is most excellent and the Cook Book nicely compiled. I thank you very much for the generous gift, and hope to use it much in my home. I hope to soon find one or two new subscribers for your paper. MRS. C. E. TEALE.

CALUMET, MO., Jan. 25, 1891.

I got the pictures all right, and am well pleased with them. They are splendid. MRS. A. M. BROWN.

GALVESTON, TEX., Jan. 24, 1891.

I received the two pictures in nice order, and am pleased with them. I think them lovely. Many thanks. MRS. S. PASK.

MICCO, FLA., Jan. 24, 1891.

The Peerless Atlas has come to hand, and, I am happy to say, far exceeds my expectations in reference to its entire makeup, typographically and statistically.

PROF. J. W. P. JENKS.

MARTIN SPRINGS, TEX., Feb. 1, 1891.

I received my Sewing Machine in good order. I have tried it and find it to be just as recommended. It sews all right, and is just as fine looking as machines sold here for \$45 and \$50. M. R. HASWELL.

WOODLYN, OHIO, Feb. 2, 1891.

I received the Singer Sewing Machine and Cook Book all O. K., and would say that the machine is better than I expected for the money, and just as good as they sell here for \$55.00. My wife is very much pleased with it. H. F. ALKIRE.

NORTH ATTLEBORO, MASS., Feb. 3, 1891.

I received the Peerless Atlas all right, and I like it very much. I would not part with it for \$5.00 if I thought I could not get another one, and I shall let all my friends see what a nice purchase I made. HUGH REILLY.

PAWTUCKET, R. I., Feb. 6, 1891.

Atlas and Cook Book have arrived. My family are much pleased with both. My wife and daughter say the Cook Book is fine, and my boys say the Atlas is "a dandy." So you have pleased us all. A. L. GOFF.

WAYNE, MICH., Feb. 8, 1891.

The Cook Book came to hand last week, and my wife says it is beyond compare with the finest of a half dozen expensive ones she has. E. S. JAMESON.

PARRY SOUND, ONT., CANADA, Feb. 11, 1891.

I received the Atlas, and am very much pleased with it. It is a beautiful book, and ought to be well received. I am more than pleased with it. R. R. HALL.

SALIDA, CAL., Feb. 8, 1891.

I received the dishes yesterday in good condition. I am very well satisfied with them and should I wish anything in your line in the future will favor you with my order. E. M. VAN NESS.

PORT WASHINGTON, N. Y., Jan. 21, 1891.

Received the Atlas yesterday all right. It is very useful and instructive. P. E. BURTIS.

PINE BLUFF, ARK., Jan. 24, 1891.

I received the premium, High-Arm, Chicago Singer Sewing Machine, and it is A No. 1. My wife thinks it cannot be excelled. I would not take \$50 for it. It runs all right, and I am very much pleased with it. NAT DUGGER.

EDINBURGH, OHIO, Jan. 5, 1891.

I feel greatly pleased with this beautiful painting, "Christ on Calvary," which I recently



ENGLISH DECORATED

Dinner Set, No. 45, 112 Pieces. Premium with an order of \$20.00. Packed and delivered at depot for \$9.00 cash.

OR we give this Set as a Premium to those who get up a Club of \$20.00 for our Teas, Spices and Extracts. We are Importers of Tea, Coffee and Crockery, and sell direct to Consumers. We want YOU to send for our 120-page Price and Premium List. It tells the whole story. Costs you nothing. Will interest and pay you.

We have hundreds of other sets, Plain and Decorated.

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8 DIFFERENT KINDS OF BRICK MACHINES with AUTOMATIC CUTTING TABLES. FULL FACTORY OUTFITS.

CAPACITY, 10 to 100,000 PER DAY.

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THOMPSON'S GRASS SEEDER

Sows CLOVER, TIMOTHY, RED TOP, and all kinds of GRASS SEEDS. Sows any quantity— evenly, accurately—in wet, dry, and windy weather. 20 to 40 Acres per day. Weight 40 lbs. O. E. THOMPSON & SONS, No. 12 River Street, YPSILANTI, MICH.

Cows are all right

in their place, but on your lawn or in your dooryard. Never! Protect yourself and beautify (without concealing) your lawn by using a "HARTMAN" STEEL PICKET FENCE.



We sell more Lawn Fencing than all other manufacturers combined because it is the HANDSOMEST and BEST FENCE made, and CHEAPER THAN WOOD. Our "Steel Picket" Gates, Tree and Flower Guards, and Flexible Steel Wire Door Mats are unequalled. A 40 page illustrated catalogue of "HARTMAN SPECIALTIES" mailed free. Mention this paper.

HARTMAN M'F'G CO., WORKS: BEAVER FALLS, PA.

BRANCHES, 102 Chambers St., New York; 508 State St., Chicago; 73 South Forsyth St., Atlanta; 1416 West Eleventh St., Kansas City.

received; it far surpasses my expectation. I will frame it and place it by the one I received one year ago, "Christ Before Pilate." I prize them beyond limit. With many thanks LESLIE A. HALL.

NORFOLK, VA., Jan. 6, 1891.

I received the two pictures in perfect order, "Christ Before Pilate" and "Christ on Calvary." I have had them framed and they make a handsome pair. I appreciate them very highly. M. F. CHAPMAN.

PERTH AMBOY, N. J., Jan. 7, 1891.

We received the pictures, "Christ Before Pilate" and "Christ on Calvary" all right, for which accept our thanks. I do not see how you can afford to give those pictures at that price. MRS. WM. BOLMER.

SCOTTSVILLE, KAN., Jan. 5, 1891.

I received the picture, "Christ on Calvary," in good order and would not part with it. Please accept my many thanks. MRS. ALICE V. RINGER.

ELLCOTT CITY, MD., Jan. 11, 1891.

I received the beautiful picture, "Christ Before Pilate," yesterday, and found it to be just as represented. I will do all that I can to introduce your paper. WILLIAM A. HILL.

NEWPORT, WIS., Jan. 6, 1891.

I return my thanks for the two beautiful pictures, "Christ Before Pilate" and "Christ on Calvary." We can't appreciate them enough. I wouldn't give them up for ten times the cost. Everybody that sees them likes them so well I think they will subscribe. MRS. FRANCES TRUCKER.

PATERSON, N. J., Jan. 9, 1891.

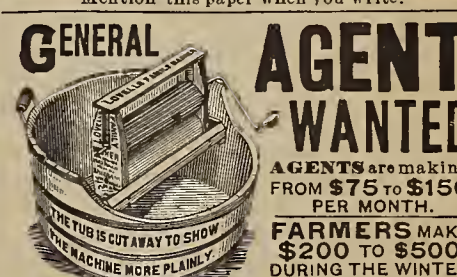
I received your beautiful picture, "Christ on Calvary," for which I am well pleased. I also received "Christ Before Pilate" for last year's subscription, and it gives me great pleasure to show it to my many friends. MRS. C. A. MILLER.

CARO, MICH., Jan. 26, 1891.

I received the Atlas and would not take \$5.00 for it if I could not get another. I am very much pleased with it. JOHN W. CRAM.



Will Play 100 TUNES. To introduce them, one in every County or town furnished reliable persons (either sex) who will promise to show it. EXCELSIOR MUSIC BOX CO., P. O. Box 2126, N. Y. City. \$75 PER MONTH SALARY. and expenses paid, any active man or woman to sell a line of Silver Plated Ware, Watches and Jewels. Apply by sample only; can live at home. We furnish Team Free. Full particulars and sample case Free. We mean just what we say, and do exactly as we agree. Address at once, Standard Silverware Co., Boston, Mass. Mention this paper when you write.



GENERAL AGENT WANTED. AGENTS are making FROM \$75 to \$150 PER MONTH. FARMERS MAKE \$200 to \$500 DURING THE WINTER. LADIES have great success selling this Washer. Retail price only \$5. Sample to those desiring an agency \$2. Also the Celebrated KEYSTONE WASHERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars. LOVELL WASHER CO., 101 Huron St., ERIE, PA. Mention Farm and Fireside when you write.



Now in its Sixth Year. A paper you are SURE TO LIKE if you once read it. Full of WOMEN'S TALK and things which every woman wants to know. Recipes, Dress-Making, Knitting, Fancy Work, HOME FURNISHING, SHORT STORIES, Mothers', Children's, Health, and Housekeepers' Departments. Plain, Practical, CLEAN. Not an objectionable line in either reading or advertisements. Three Months' Trial, 10c. (stamps or silver, free of postage. Address HOME QUEEN, 917 Market St., Philadelphia, Pa. Mention this paper when you write.

\$500 REWARD FOR "FATHER"

To introduce our goods we will give \$200 to the first person telling us before June 1st, 1891, where the word Father is first found in the New Testament; to the next, \$125; to the next, \$100; to the next, \$75; to the next, a Solid Gold Watch; to the next a beautiful pair of Diamond Earrings; to the next an Elegant Diamond Ring; to each of the next 25 a Solid Gold Filled Watch; to the next 50 each a valuable and choice Business or House Lot; and to each and every one who answers this, whether correct or not, we will send the following: 100 Newest Designs in Fancy Work; 25 Complete Novels, Dickens, Winkle Collins, and others; 125 Money-Making Secrets; 100 Latest Songs; 250 Mottoes and Verses for Albums; 75 Conjuring Tricks; 60 Charades, Enigmas, Riddles, the Game of Nine Penny Morris, the Great \$500 Prize Puzzle; Album of the World's Celebrities; 200 Pictures; The Seventh Book of Moses; 25 Fireside Games; 26 Artistic Embroidery Letters; Buckner's Wonderful Music Chart, a complete Self-Instructor for Piano and Organ, price 25 cents; The Great Five Column Game of Fortune; Deaf and Dumb Alphabet; Kismet, the Oracle of Fate; The Game of Fox and Geese; The Lovers' Telegraph; Language of Flowers and Jewels; Egyptian Astrology; 10 Pieces Full Size Sheet Music worth 25 cents each; The Marriage Looking Glass; a large Beautifully Illustrated 64 Page Book. With your answer send 50 Cents, Cash, Postal Note or Stamps, to help pay cost of packing and transportation, and we will send all of the above-named, and illustrated Catalogue showing how to make \$100 a week. Printed list, giving names and addresses of the winners, will be mailed each contestant June 2d, 1891. This is the opportunity of a life-time. Address THE U. S. MANUFACTURING CO., P. O. Box 2196, New York City.

Smiles.

TWO PROFESSIONS.

HE.

You ne'er can object to my arm around your waist,
And the reason you'll readily guess;
I'm an editor, dear, and I always insist
On the "liberty of the press."

SHE.

I'm a minister's daughter believing in texts,
And I think all the newspapers bad;
And I'd make you remove your arm, were it not
You were making waist places glad.
—G. E. Throop, in Life.

"Oh, would that hand were mine!" he said,
And smiled at her so sweet;
But not a tremor filled her heart;
She coolly kept her seat.

Because the hand he wished to own,
Of flesh and blood was not;
'Twas only just a royal flush
She held that scooped the "pot."

—New York Herald.

DID NOT DISOBEY.

THOMAS, you have disobeyed your old grandfather.
"No, I didn't, ma."
"Yes, you did. Have you not been in swimming?"
"Yes, ma."
"Didn't I hear him say to you not to go in swimming?"
"Oh, he didn't tell us that; he only came out and said: 'Boys, I wouldn't go in swimming,' and I shouldn't think he would, an old rhenmatticky man like him, but he didn't say nothin' about our going in swimming."

NOTHING VERY NEW.

Mrs. De Visite—"Good afternoon, Miss Blank. Is your mother at home?"
Miss Blank—"No. She has gone to Mrs. De

THE "MURRAY" LADIES' CART.

The illustration on this page represents the "Murray" Ladies' Cart, built on their celebrated Comfort Springs, which are absolutely free from horse motion, and ride as easy as a buggy. This Cart is the latest English pattern and the most stylish on

WANTED THE DIRECTIONS.

Mrs. O'Rourke—"I wish yez would give me an order for some medicine, your riverence, for little Jimmy here. He's been ailing for two wakes."

Father Reilly—"I think a little soap and water would do him as much good as anything."

Mrs. O'Rourke—"Would yez give it to him before or afther his males, your riverence?"—Puck.

THE SMART OFFICE BOY.

Distinguished individual—"Possibly, sir, you do not remember me. Years ago I was your office boy. One day you sent me out with \$10 to buy stamps. I took that money, invested it, and realized a cool \$100,000."

Great merchant—"Well, I'll forgive you. What do you want now?"

Distinguished individual—"I would like to borrow another \$10."—New York Sun.

ARTLESS INNOCENCE.

Mother (gazing at her daughter's dressing cushion)—"Why, where did you get so many gentlemen's scarf pins?"

Daughter—"I don't know myself. I find one in my hair almost every night after Gus calls, and to save me I can't imagine how they get there."

HE COULD BEAR IT.

"The operation," said the surgeon gently to the man who had just met with an accident, "will be very painful. I strongly advise you to take an anæsthetic."

"No," said the sufferer, "I think I can bear it. I have been used to shaving myself."—St. Joseph News.

USES OF SOCIETY.

Maiden—"It seems to me society is useful only to people who want to get married."

Matron—"You mistake, my dear. It is equally useful to people who are married and want to forget it."—New York Weekly.

AGAINST THE LAW.

Anxious youth—"Here's a letter I want for-

BEECHAM'S PAINLESS PILLS EFFECTUAL.

WORTH A GUINEA A BOX.
For BILIOUS & NERVOUS DISORDERS

Such as Wind and Pain in the Stomach, Fullness and Swelling after Meals, Dizziness, and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blisters on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c.

THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES.
BEECHAM'S PILLS TAKEN AS DIRECTED RESTORE FEMALES TO COMPLETE HEALTH.

For Sick Headache, Weak Stomach, Impaired Digestion, Constipation, Disordered Liver, etc.,

they ACT LIKE MAGIC, Strengthening the muscular System, restoring long-lost Complexion, bringing back the keen edge of appetite, and arousing with the ROSEBUD OF HEALTH the whole physical energy of the human frame. One of the best guarantees to the Nervous and Debilitated is that BEECHAM'S PILLS HAVE THE LARGEST SALE OF ANY PROPRIETARY MEDICINE IN THE WORLD.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England. Sold by Druggists generally. B. F. ALLEN CO., 365 and 367 Canal St., New York. Sole Agents for the United States, who (if your druggist does not keep them) WILL MAIL BEECHAM'S PILLS on RECEIPT of PRICE, 25cts. A BOX. (MENTION THIS PAPER.)

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Has the Finest Farms, Richest Soils, Nearest Markets. Farms sold at low prices, easy payments and long time. No cyclones or blizzards. O. M. BARNES, Land Commissioner, Lansing, Mich.

FARMS

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PATENTS

FRANKLIN H. HOUGH, WASHINGTON, D. C. No attorney's fee until patent obtained. Write for INVENTOR'S GUIDE.

PATENTS

F. A. Lehmann, WASHINGTON, D. C. Send for circular

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L. Y. JENNESS, SANFORD, FLORIDA.

Go South, Young Man!

Go where the fertile fields are ready to make your fortune for you, to an excellent climate, away from the hard Winters of the North, where you can plant a crop every month in the year, where every fruit and vegetable will grow luxuriantly, and King Cotton each year will assist you to become rich rapidly with one-half the exertion required to enable you to have a bare living at the North. Full information by addressing B. W. HITCHCOCK, 14 Chambers St., New York.

THE PEOPLE'S KNITTING MACHINE.

Retail Price only \$5.00. Will knit Stockings, Mitts, Scarfs, Leggings, Fancy-work, and everything required in the household from homespun or factory yarn. Simple and easy to operate. Just the machine every family has long wished for. Send \$2 with your order; I will ship machine, threaded up, with full instructions, by express C. O. D. for balance, \$3, when machine is received. Large commission to agents. Circular and terms free. Address J. E. GEARHART, Clearfield, Pa.

GOLD PLATED

Don't buy a common looking silver watch, when you can now obtain for the small sum of \$5.85 a genuine gold plated, hunting case, full engraved watch; equal in appearance to many watches sold by retail jewelers at \$25.00 to \$30.00. Fitted complete with our own special ruby jeweled, extra fine finished movement, guaranteed for its perfect time keeping qualities and superb appearance; magnificently finished, highly polished pinions, enamel dial, specially tested, adjusted and regulated so as to give perfect results as a timekeeper. In carrying this watch you have the credit of carrying a solid gold watch, as the plating process is got down so fine now-a-days that it is almost impossible for the ordinary observer to detect the difference. The engraving is just like that on high priced watches and comes in the very latest and latest patterns. Some will doubt our ability to be able to supply such a watch at this price, and to convince you that we mean just what we say, we make the following most extraordinary offer for the next 30 days.

READ! Cut this out and send it with your order, and we will promptly ship the watch to you by express C. O. D. with instructions to the express agent to allow you to examine it at the express office. If on examination you are convinced that it is a bargain, pay the agent \$5.85 and the express charges and it is yours, otherwise you pay nothing and it will be returned at our expense. We could not afford to make such an offer as this unless we were confident that the watch will not only please you, but be a surprise to you. This price will be for 30 days only.

THE NATIONAL MFG. & IMPORTING CO., 191 and 193 Clark Street, Chicago, Illinois. Mention this paper when you write.



THE GLEN PHOTOGRAPH CAMERA is not a Toy but an actual PHOTOGRAPHING MACHINE operating on the Standard Scientific Principles and producing pictures which fully equal those of a High Priced Photographing Apparatus. It makes Pictures 2 1/2 x 3 1/2 inches. The Glen Camera is durable, being made of Stained Wood, and placed in a beautiful outside box finished in Moroccoette. With ordinary care it will last as long as any of the High Priced Machines and will make hundreds of Photographs of Landscapes, Houses, Groups, Choice Bits of Scenery, Old Landmarks, etc., in fact The Glen Camera will Photograph anything and everything. To operate it is easily learned. A complete Instruction Book accompanies each order for THE GLEN CAMERA. One careful reading will enable any one to operate it successfully. The Glen Instruction Book further gives explicit directions in the following branches of Photography: How to make a Ruby Lamp; Placing the Plate in Camera; Taking the Picture; Developing the Plate; How to Print the Photograph; The Toning and Finishing Bath; Mounting the Photograph; List of Chemicals to be used and how to mix them; Miscellaneous Remarks, etc. The Glen Camera is a beautiful gift for a boy or girl. It will afford amusement and instruction to young and old. What is more interesting than to Photograph and preserve for all time to come the Endearing Scenes and Landmarks that link together "Sweet Memory's Pictures of long ago." THE GLEN CAMERA complete with Instruction Book will be sent fully prepaid upon receipt of 50 Cents, silver, Postal Note, Express or Money Order, or 55 Cents in Stamps. Satisfaction guaranteed or money refunded. Agents wanted for exclusive Territory. Address, THE GLEN CAMERA COMPANY, 294 Broadway, New York.

A BIG OFFER

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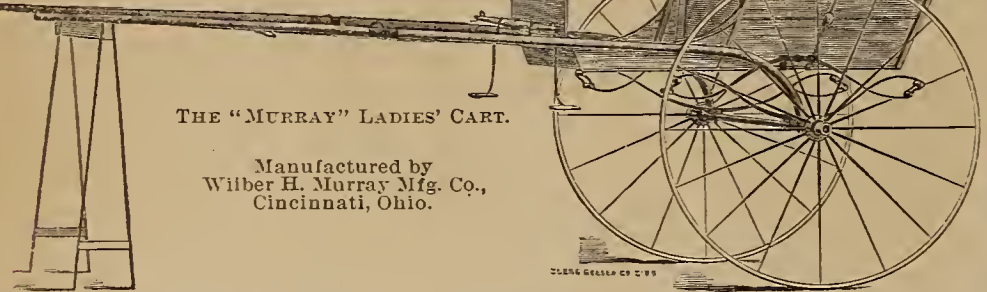


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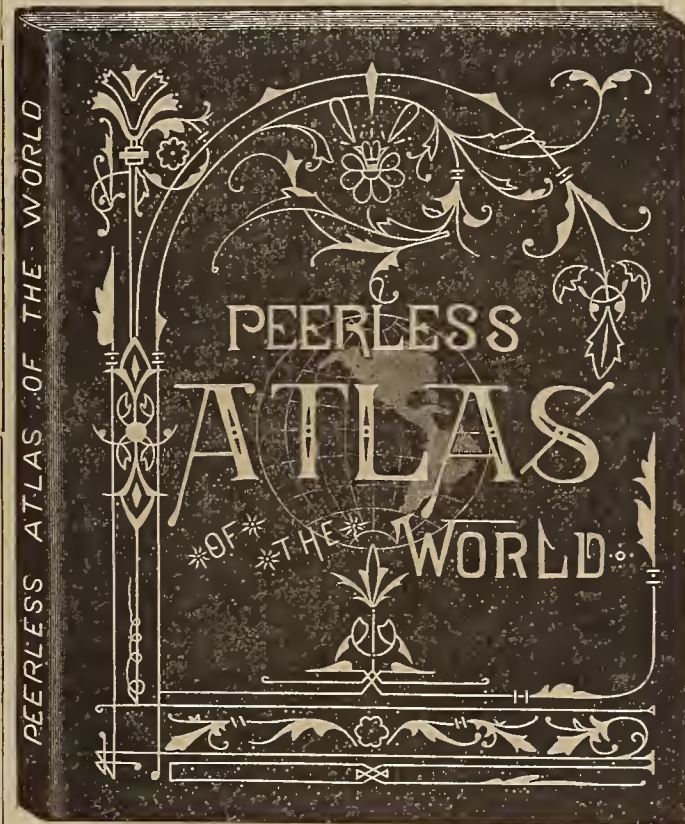
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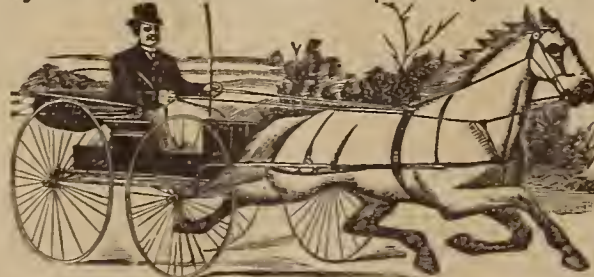
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